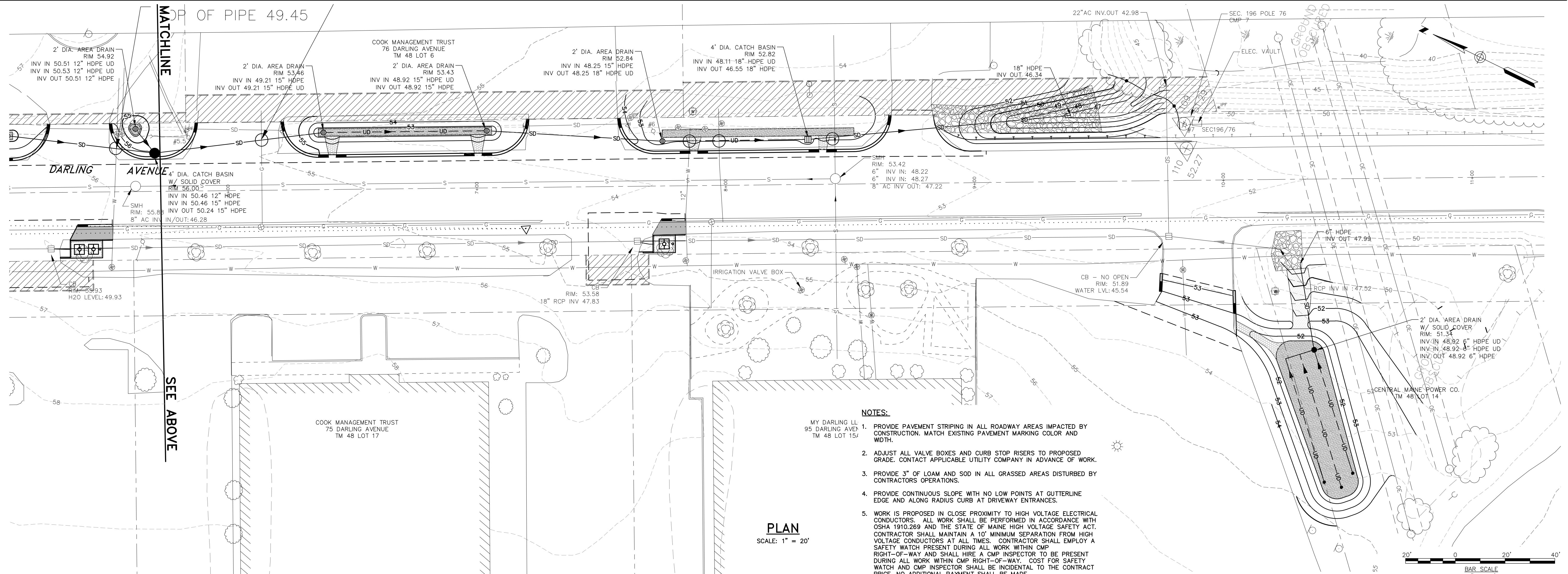
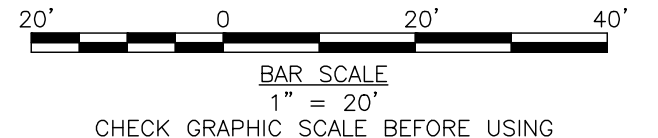


PLAN
SCALE: 1" = 20'



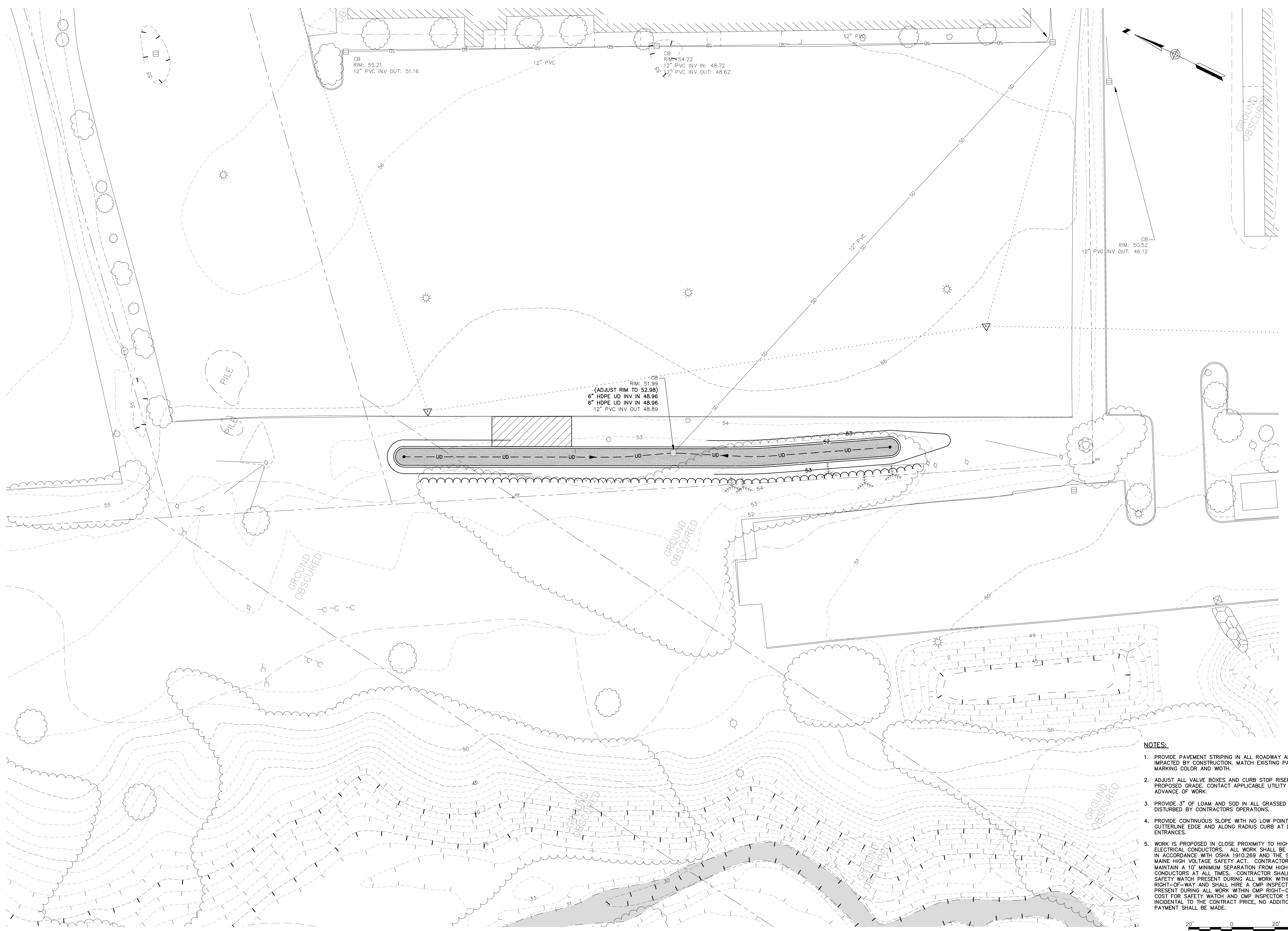
PLAN
SCALE: 1" = 20'

- NOTES:**
1. PROVIDE PAVEMENT STRIPING IN ALL ROADWAY AREAS IMPACTED BY CONSTRUCTION. MATCH EXISTING PAVEMENT MARKING COLOR AND WIDTH.
 2. ADJUST ALL VALVE BOXES AND CURB STOP RISERS TO PROPOSED GRADE. CONTACT APPLICABLE UTILITY COMPANY IN ADVANCE OF WORK.
 3. PROVIDE 3" OF LOAM AND SOD IN ALL GRASSED AREAS DISTURBED BY CONTRACTOR'S OPERATIONS.
 4. PROVIDE CONTINUOUS SLOPE WITH NO LOW POINTS AT GUTTERLINE EDGE AND ALONG RADIUS CURB AT DRIVEWAY ENTRANCES.
 5. WORK IS PROPOSED IN CLOSE PROXIMITY TO HIGH VOLTAGE ELECTRICAL CONDUCTORS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA 1910.269 AND THE STATE OF MAINE HIGH VOLTAGE SAFETY ACT. CONTRACTOR SHALL MAINTAIN A 10' MINIMUM SEPARATION FROM HIGH VOLTAGE CONDUCTORS AT ALL TIMES. CONTRACTOR SHALL EMPLOY A SAFETY WATCH PRESENT DURING ALL WORK WITHIN CMP RIGHT-OF-WAY AND SHALL HIRE A CMP INSPECTOR TO BE PRESENT DURING ALL WORK WITHIN CMP RIGHT-OF-WAY. COST FOR SAFETY WATCH AND CMP INSPECTOR SHALL BE INCIDENTAL TO THE CONTRACT PRICE. NO ADDITIONAL PAYMENT SHALL BE MADE.



Record Drawings Prepared by R.J. Grondin
SITE PLAN - 1

22209102-C200A-AS-BUILD.DWG



CB
RIM: 51.99
(ADJUST RIM TO 52.98)
6\"/>

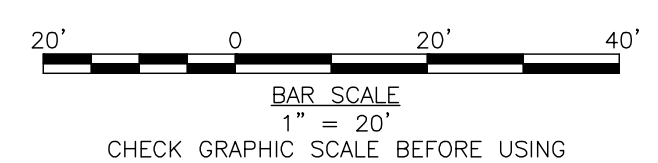
CB
RIM: 55.21
12\"/>

CB
RIM: 54.22
12\"/>

CB
RIM: 50.52
12\"/>

NOTES:

1. PROVIDE PAVEMENT STRIPING IN ALL ROADWAY AREAS IMPACTED BY CONSTRUCTION. MATCH EXISTING PAVEMENT MARKING COLOR AND WIDTH.
2. ADJUST ALL VALVE BOXES AND CURB STOP RISERS TO PROPOSED GRADE. CONTACT APPLICABLE UTILITY COMPANY IN ADVANCE OF WORK.
3. PROVIDE 3\"/>



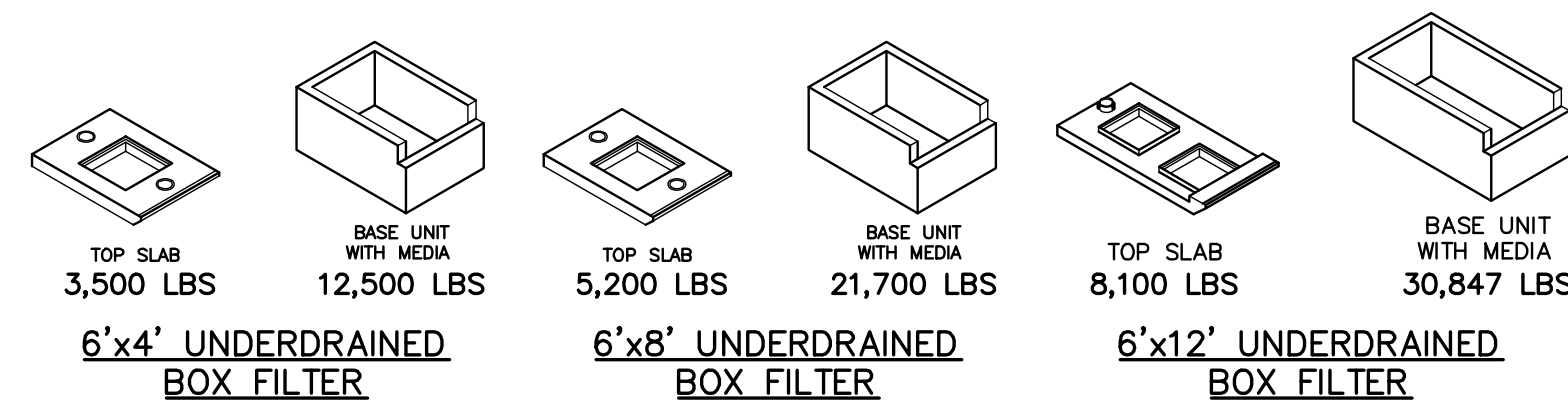
PLAN
SCALE: 1" = 20'

Record Drawings Prepared by R.J. Grondin
SITE PLAN - 3

22209102-C200A AS-BUILT.DWG

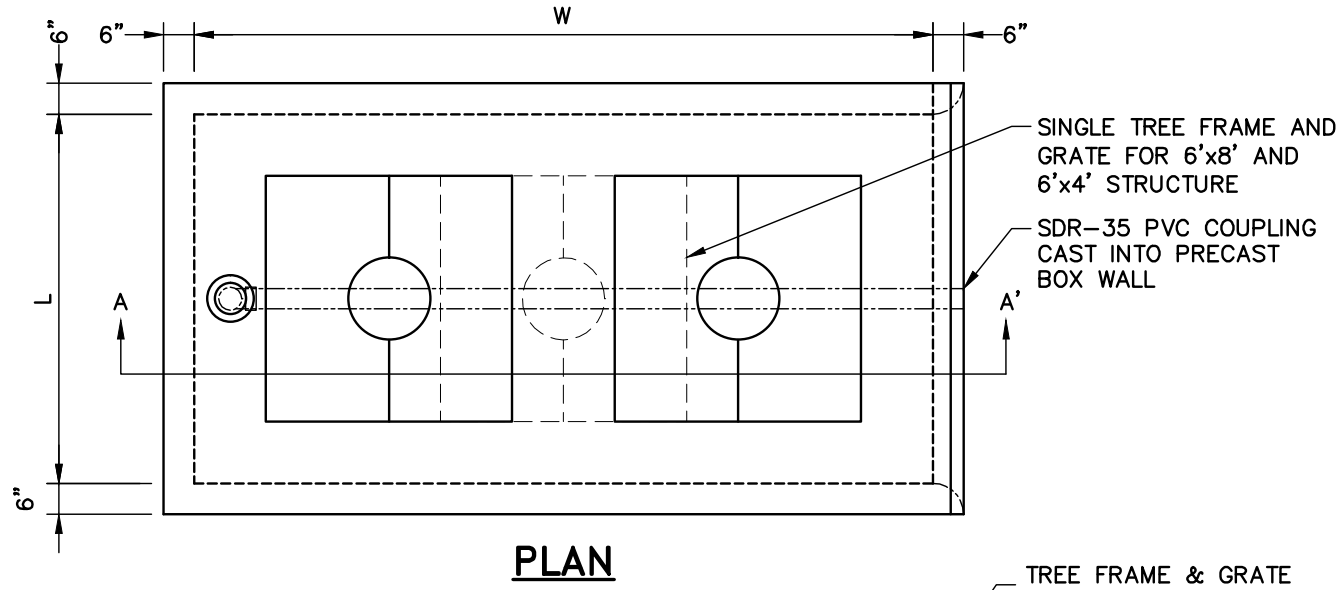
222091.02
FEBRUARY 15, 2011

C003

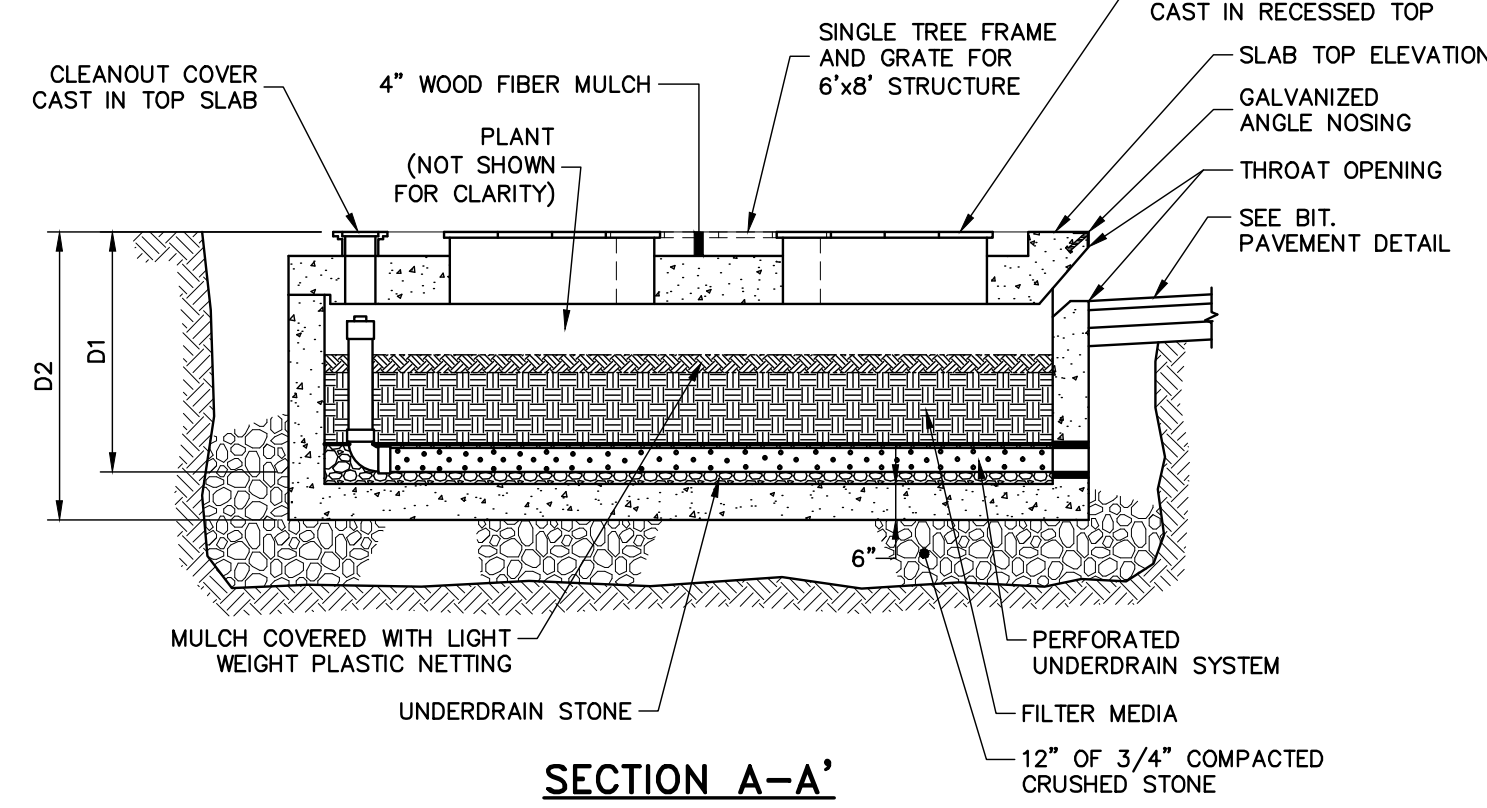


NOTE:

1. LISTED WEIGHTS ARE APPROXIMATE. CONFIRM WEIGHTS WITH MANUFACTURER PRIOR TO INSTALLATION.



PLAN



SECTION A-A'

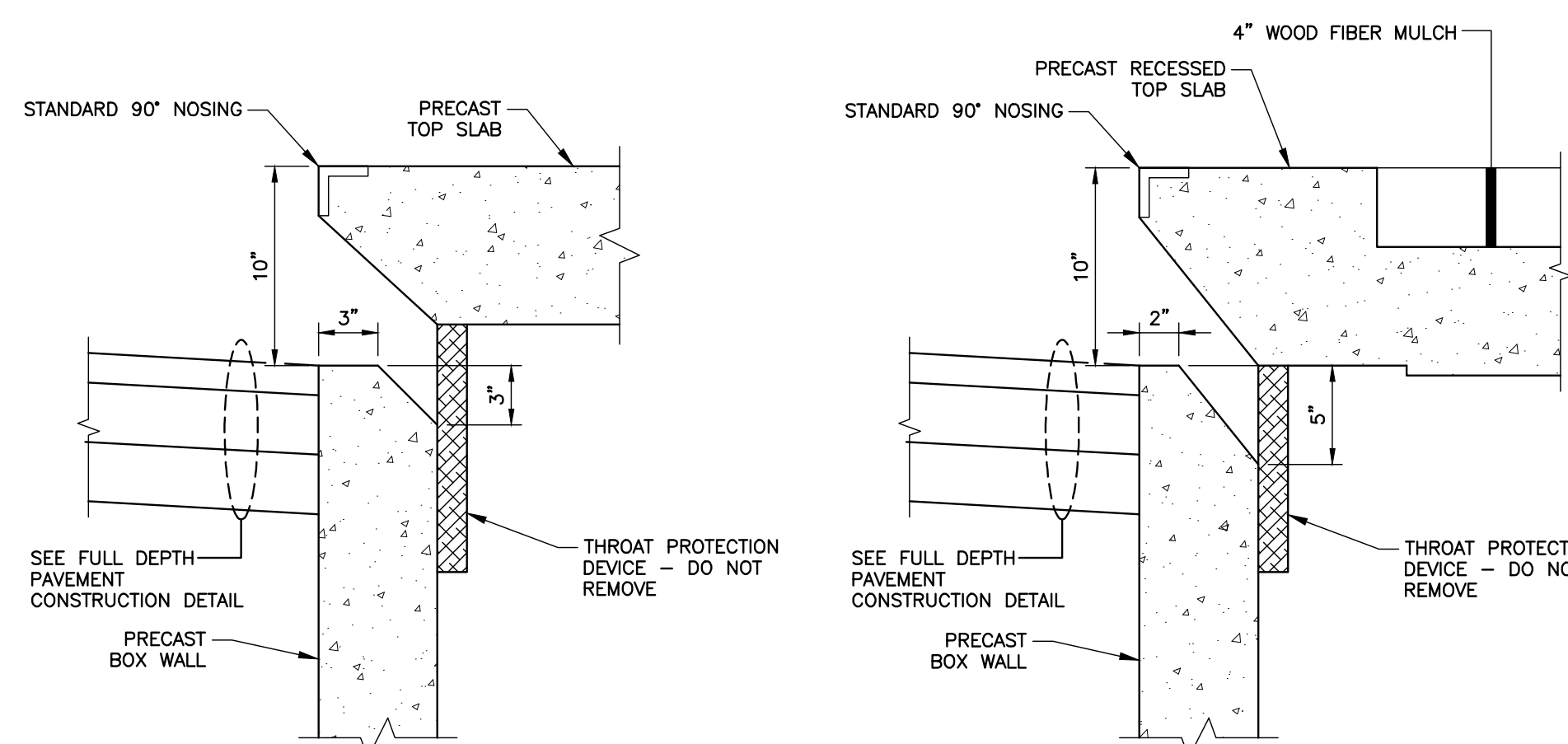
UNDERDRAINED BOX FILTER SCHEDULE							
FILTER #	L	W	D1	D2	GRATES	UNDERDRAIN PIPE DIA.	SLAB TOP
1	6'	12'	3'-4"	4'-0"	2	6"	RECESSED
2	6'	8'	3'-2"	3'-10"	1	4"	RECESSED
3	6'	4'	3'-6"	4'-2"	1	4"	STANDARD
4	6'	8'	3'-6"	4'-2"	1	4"	STANDARD
5	8'	6'	3'-4"	4'-0"	1	4"	RECESSED

NOTE:

1. UNDERDRAINED BOX FILTER BY FILTERRA® OR APPROVED EQUAL.
2. PLANT SELECTION SHALL BE DWARF FOUNTAIN GRASS - PENNISTUM ALOPECUROIDES, "HAMELN", OR APPROVED EQUAL. PLANT SHALL EXTEND LESS THAN 1.5' ABOVE TOP SLAB OF FILTERRA UNIT.
3. ALL PRODUCTS SHALL BE MANUFACTURED IN THE UNITED STATES.
4. UNDERDRAINED BOX FILTER #3 AND #4 SHALL HAVE GALVANIZED NOSING AT BOTH CURB EDGES AND AT FRONT FACE.

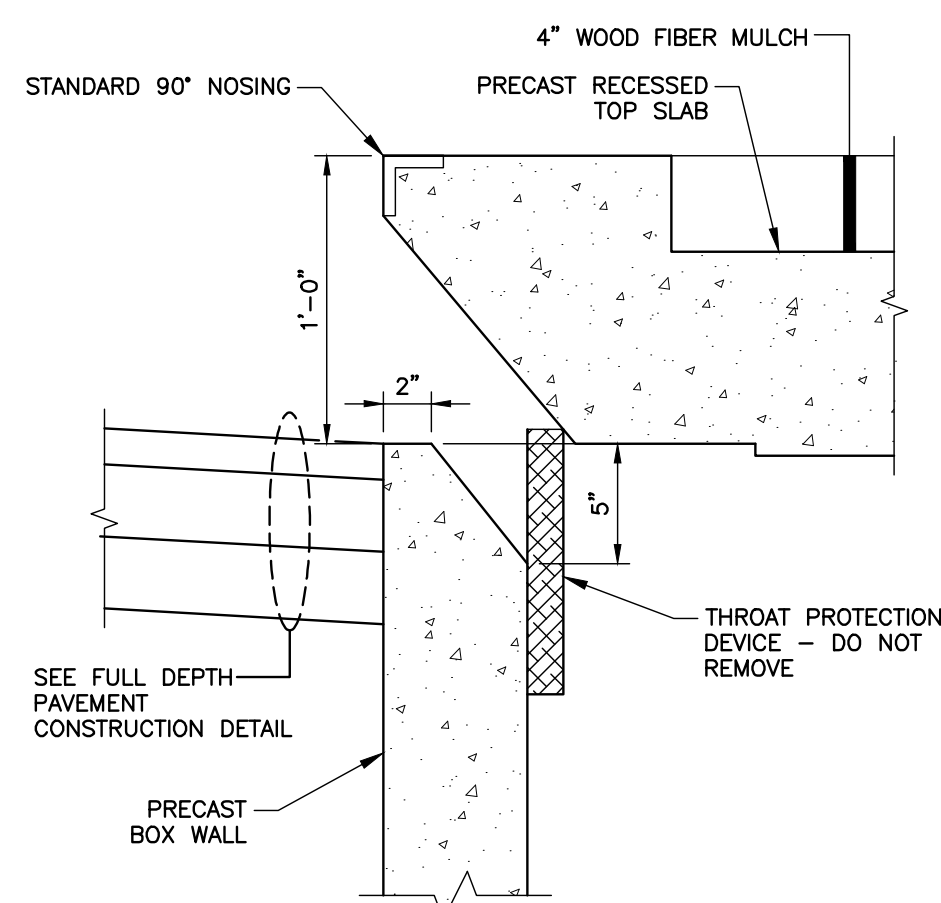
UNDERDRAINED BOX FILTER UNIT

N.T.S.



BOX FILTER #3 AND #4

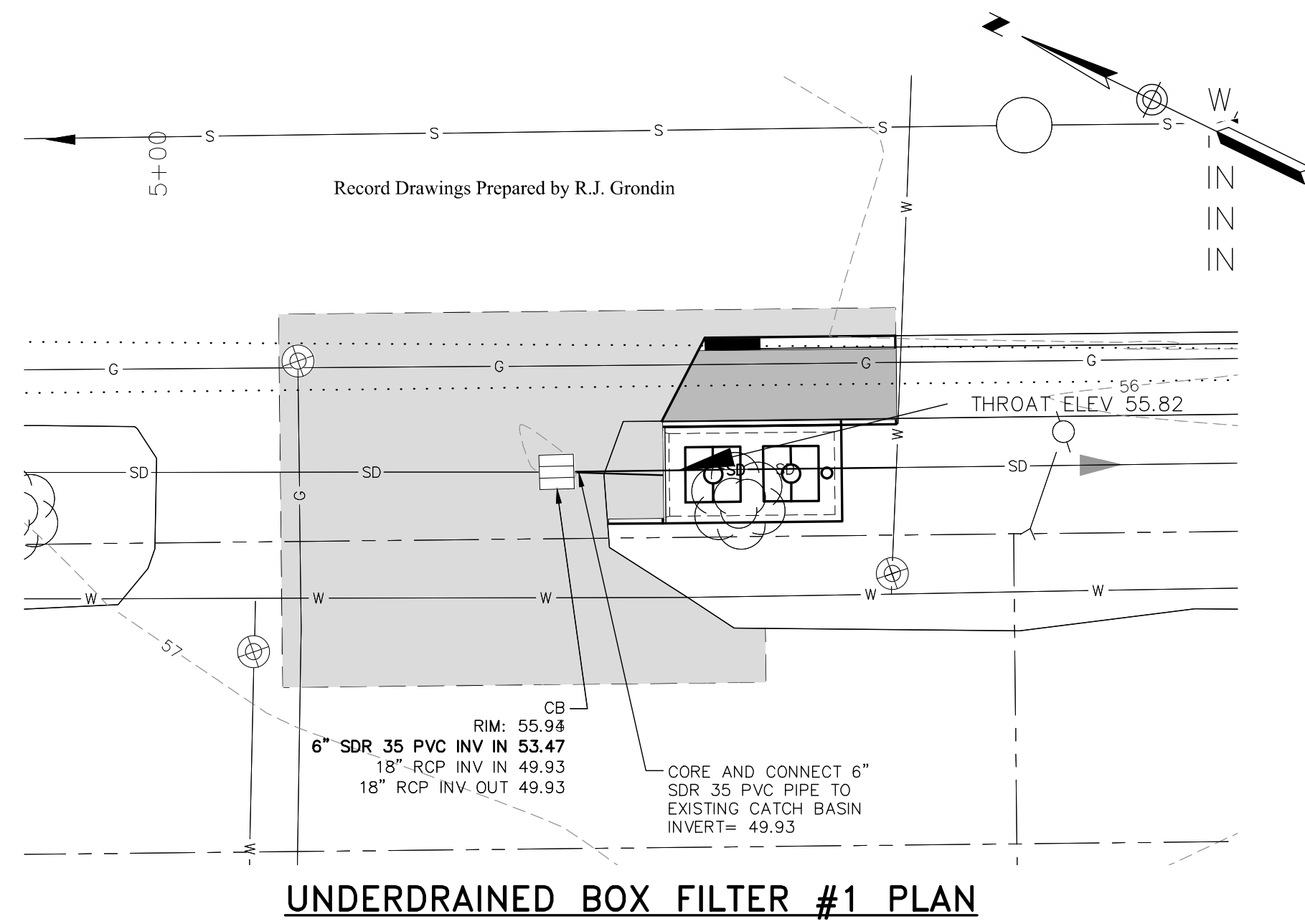
BOX FILTER #2



BOX FILTER #1 AND #5

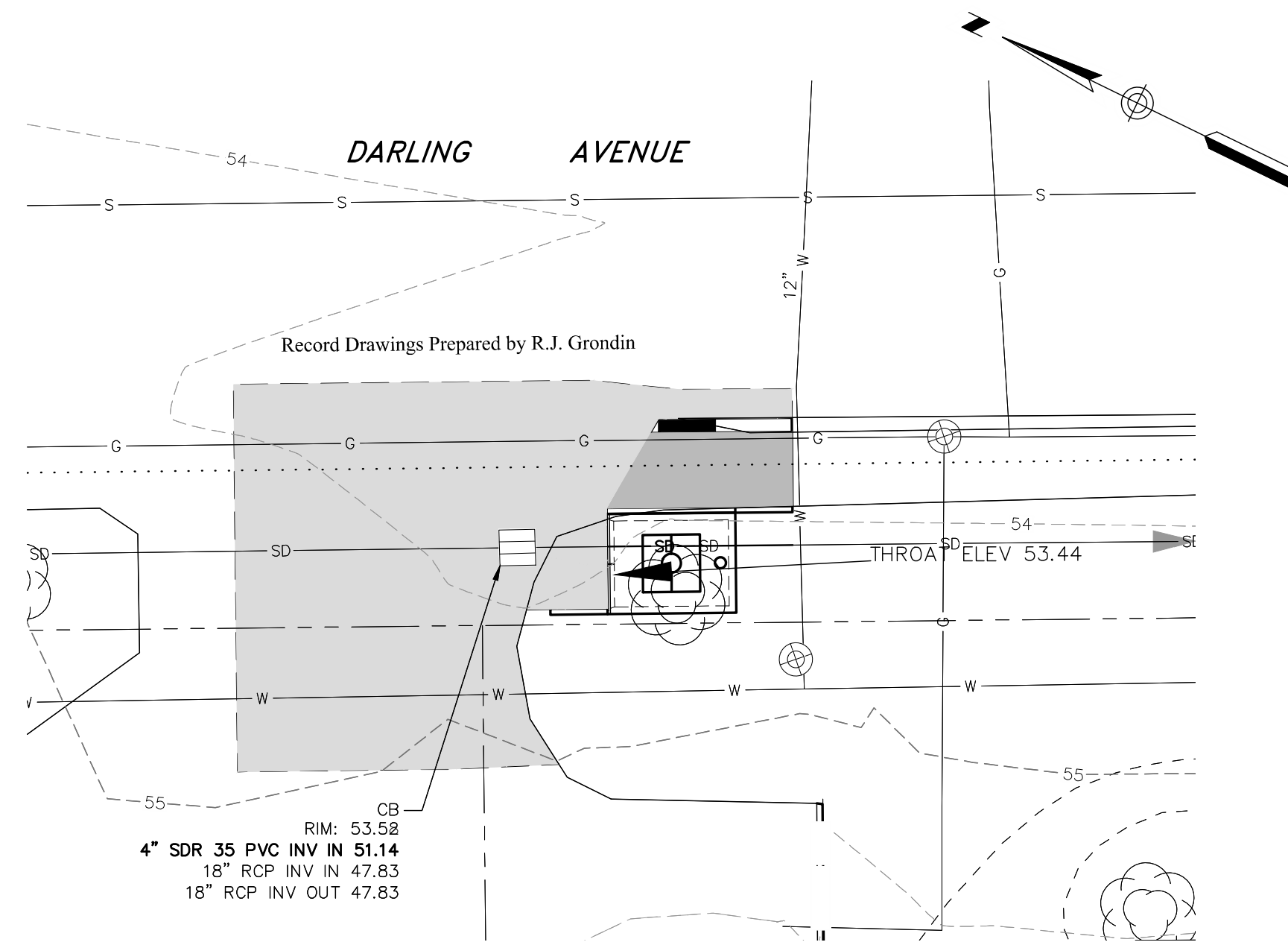
UNDERDRAINED BOX FILTER THROAT OPENING DETAIL

N.T.S.



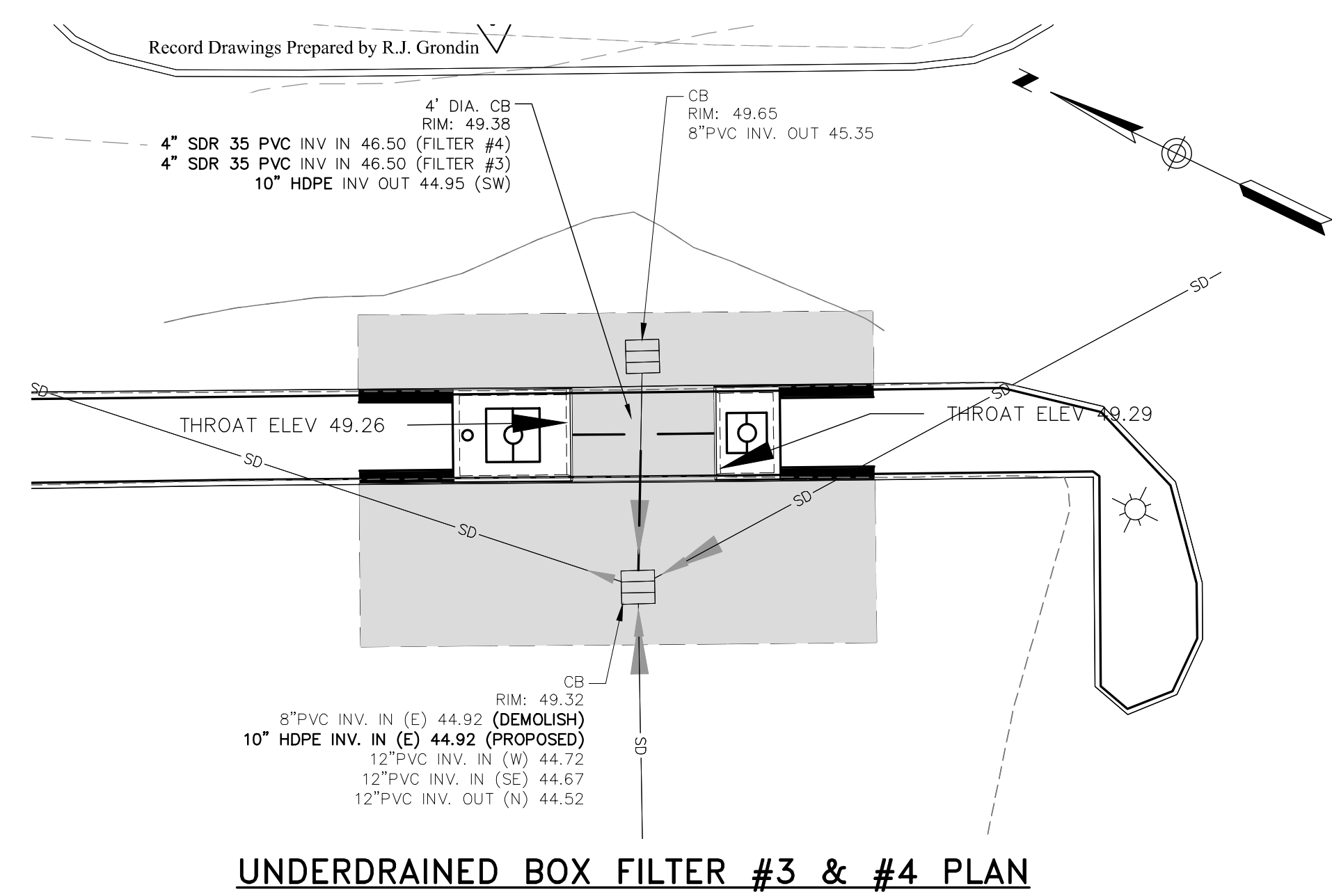
UNDERDRAINED BOX FILTER #1 PLAN

SCALE: 1"=10'



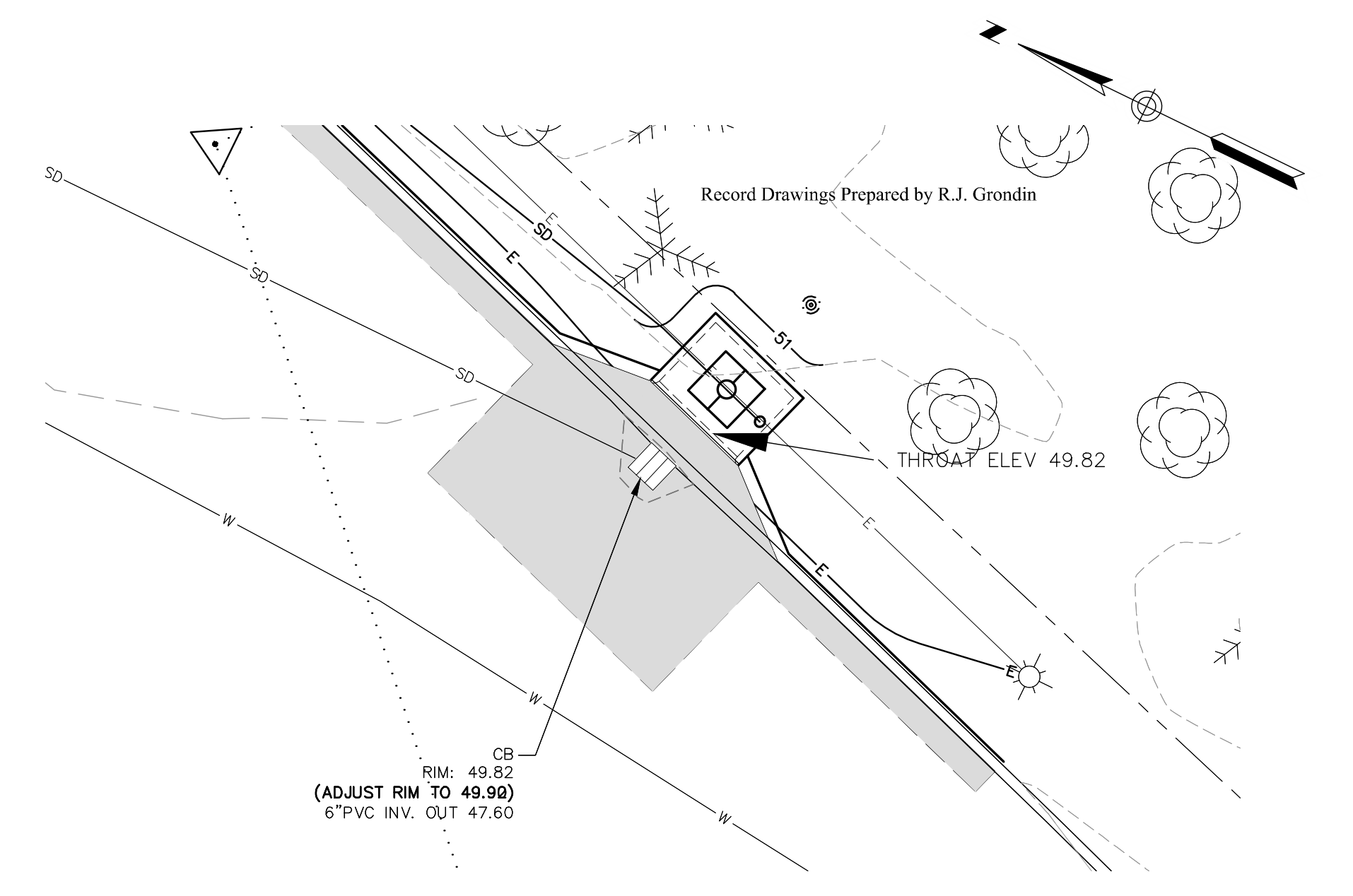
UNDERDRAINED BOX FILTER #2 PLAN

SCALE: 1"=10'



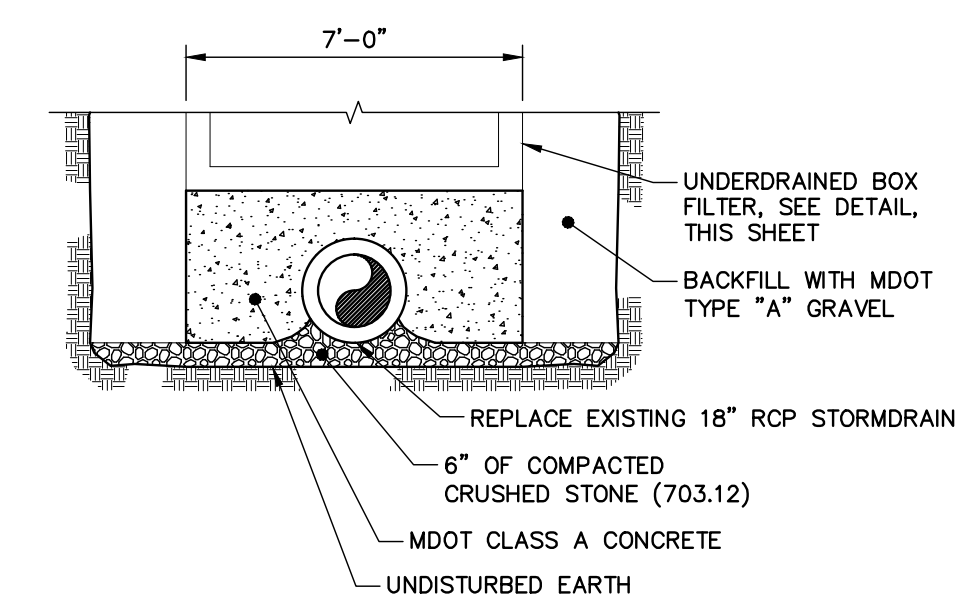
UNDERDRAINED BOX FILTER #3 & #4 PLAN

SCALE: 1"=10'

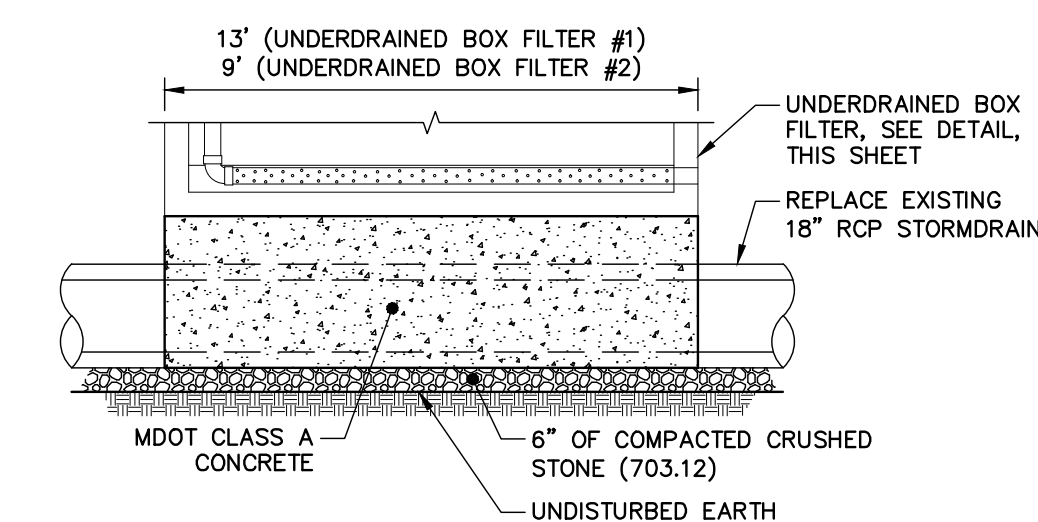


UNDERDRAINED BOX FILTER #5 PLAN

SCALE: 1"=10'



SECTION

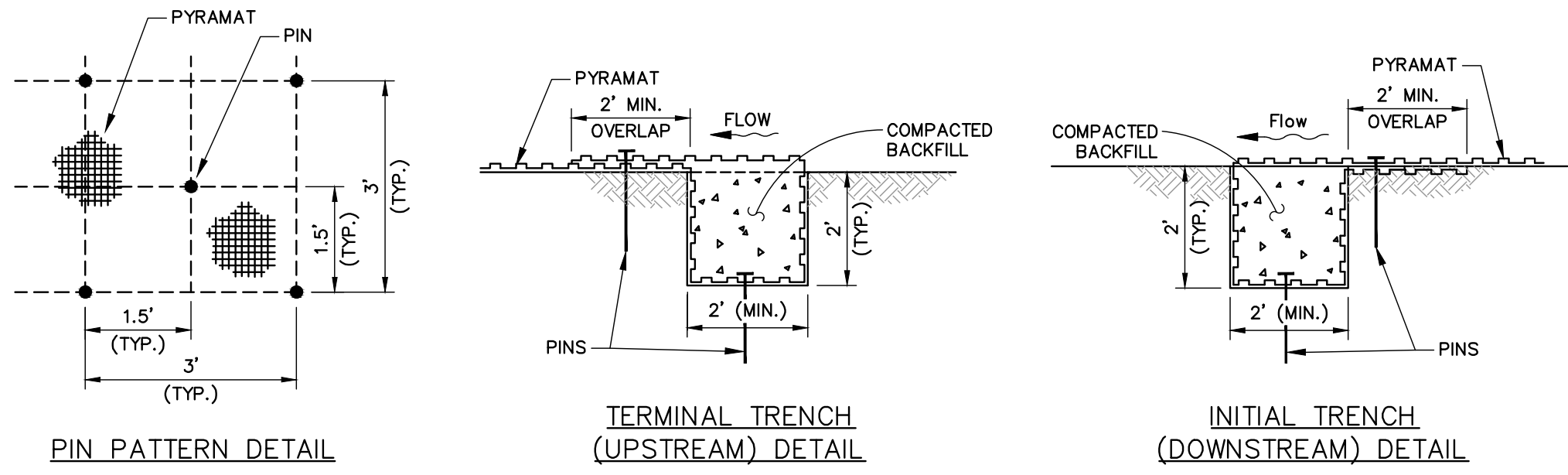
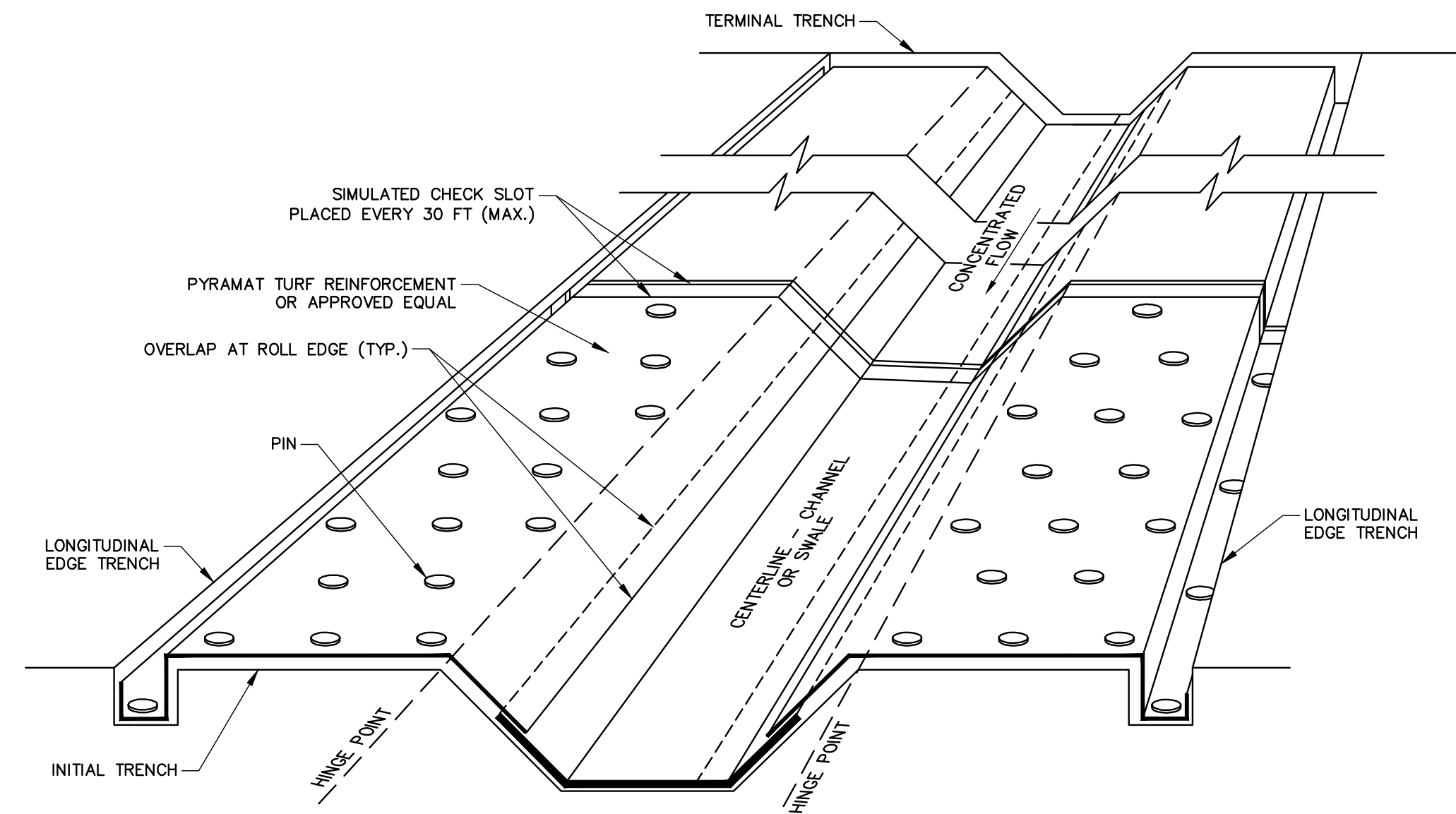


SECTION

UNDERDRAINED BOX FILTER #1 AND #2 BEDDING

N.T.S.

Record Drawings Prepared by R.J. Grondin
CIVIL DETAILS - 1



- SITE PREPARATION**
- GRADE AND COMPACT AREA OF SPILLWAY AS SHOWN ON PLANS. SUBGRADE SHALL BE UNIFORM AND SMOOTH. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBJECTS SO THE INSTALLED MAT WILL HAVE DIRECT CONTACT WITH SOIL SURFACE.
 - PLACE 4" LOAM BELOW TURF REINFORCEMENT MAT.
 - INCORPORATE AMENDMENTS SUCH AS LIME AND FERTILIZER AND/OR WET THE SOIL, IF NEEDED.
 - DO NOT MULCH AREAS WHERE MAT IS TO BE PLACED.

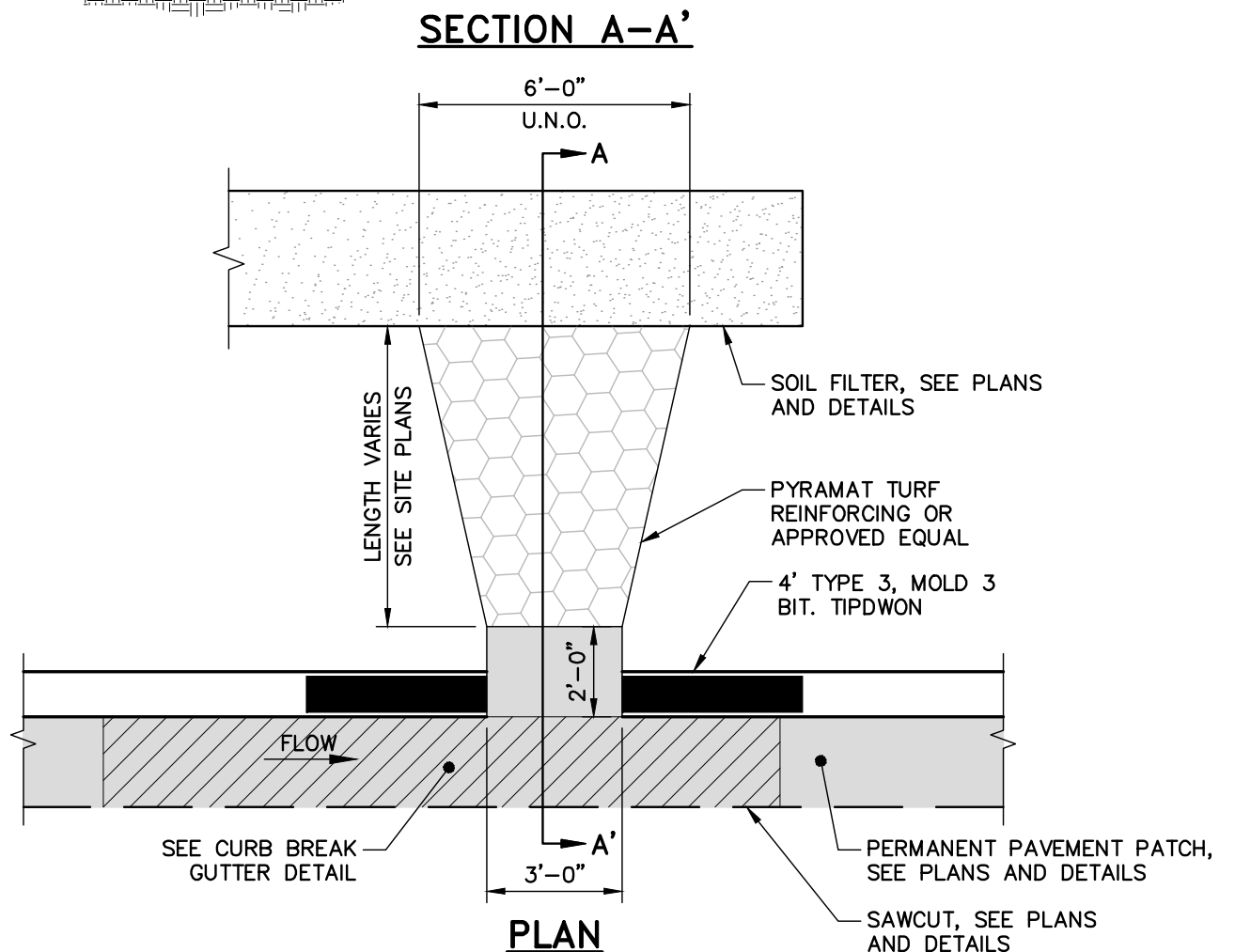
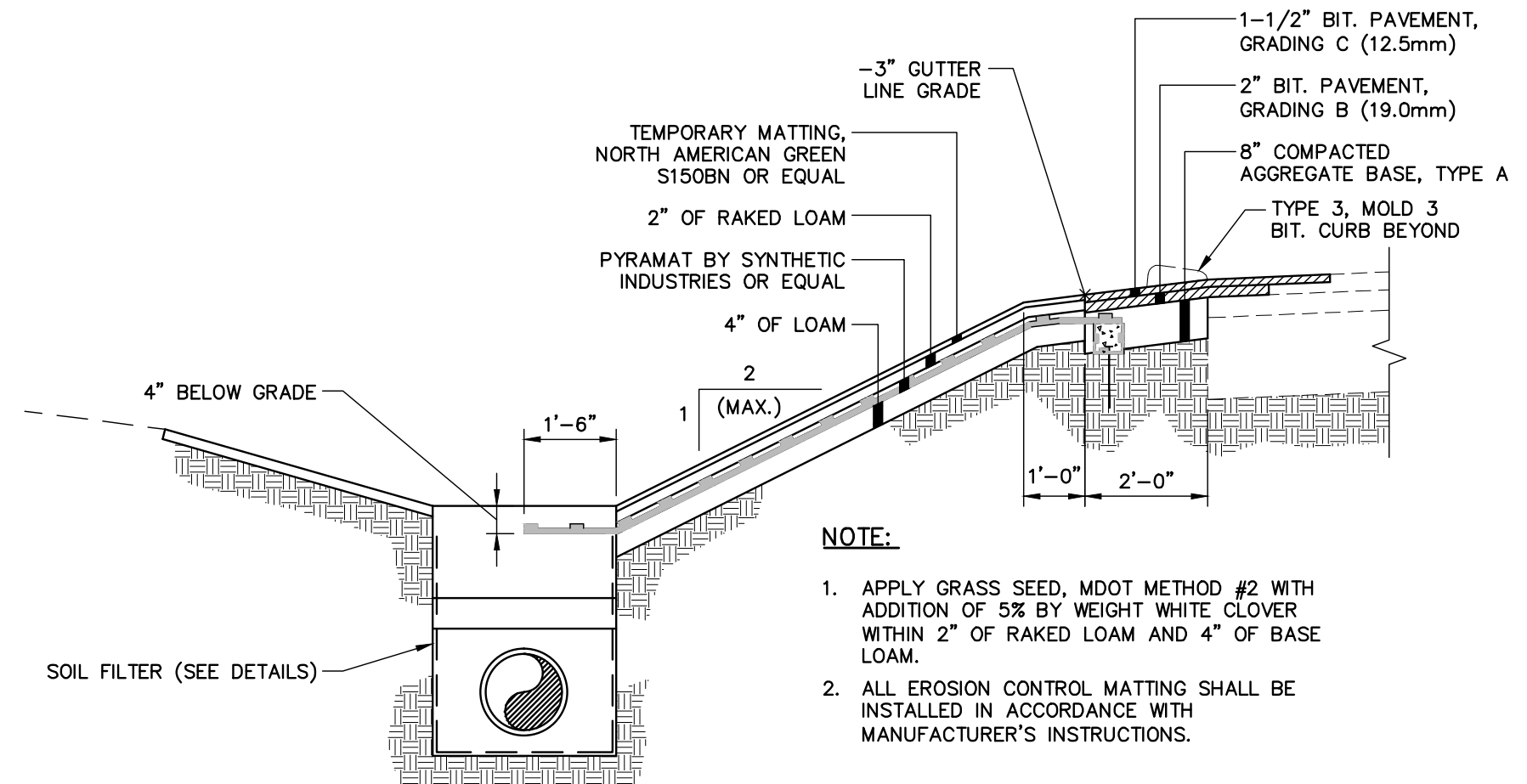
- SEEDING**
- APPLY SEED TO SOIL SURFACE BEFORE INSTALLING MAT. DISTURBED AREAS SHALL BE RESEED. CONSULT PROJECT PLANS AND/OR SPECIFICATIONS FOR SEED TYPES AND APPLICATION RATES.

- INSTALLATION**
- EXCAVATE AN INITIAL TRENCH 24" WIDE X 24" DEEP MINIMUM ACROSS THE CHANNEL AT DOWNSTREAM END OF PROJECT. DEEPER INITIAL TRENCH AND/OR HARD ARMORING MAY BE REQUIRED IN CHANNELS THAT HAVE THE POTENTIAL FOR SCOUR.
 - EXCAVATE A LONGITUDINAL EDGE TRENCH ALONG BOTH SIDES OF THE INSTALLATION TO BURY EDGES OF MAT.
 - BEGINNING AT THE CENTERLINE OF THE CHANNEL, PLACE ROLL END INTO THE INITIAL TRENCH (WITH 24" MINIMUM LAP) AND SECURE WITH PINNING DEVICES AT 12" O.C. POSITION ADJACENT ROLLS AND SECURE IN TRENCH IN SAME MANNER. BACKFILL AND COMPACT SOIL INTO TRENCH AS DIRECTED AND APPROVED BY ENGINEER.
 - UNROLL MAT IN THE UPSTREAM DIRECTION OVER THE COMPACTED TRENCH.
 - SECURE INITIAL TRENCH LAP WITH PINNING DEVICES AT 12" O.C.
 - SECURE LONGITUDINAL EDGE TRENCH WITH PINNING DEVICES AT 12" O.C.
 - CONTINUE INSTALLATION AS DESCRIBED ABOVE. OVERLAPPING ADJACENT ROLLS AS FOLLOWS:
 - ROLL EDGE OVERLAP: 6" MINIMUM OVERLAP WITH UPSLOPE MAT ON TOP. SECURE WITH ONE ROW OF GROUND PINNING DEVICES AT 12" O.C.
 - ROLL END OVERLAP: 12" MINIMUM OVERLAP WITH UPSLOPE MAT ON TOP. SECURE WITH TWO ROWS OF GROUND PINNING DEVICES STAGGERED 12" APART AT 12" O.C.
 - SECURE MAT USING SUGGESTED GROUND PINNING DEVICES FOR APPROPRIATE FREQUENCY AND PATTERN SHOWN ON THE PIN PATTERN.
 - EXCAVATE TERMINAL TRENCH 24" WIDE X 24" DEEP MINIMUM ACROSS THE CHANNEL AT THE UPSTREAM END OF THE PROJECT.
 - PIN, BACKFILL AND COMPACT UPSTREAM END OF MAT IN TERMINAL TRENCH. TERMINAL TRENCH PINNING DEVICES SHOULD BE SPACED AT 12" O.C. UNROLL MAT IN DOWNSTREAM DIRECTION OVER COMPACTED TRENCH WITH A MINIMUM 24" LAP. SECURE LAP WITH PINNING DEVICES AT 12" O.C.

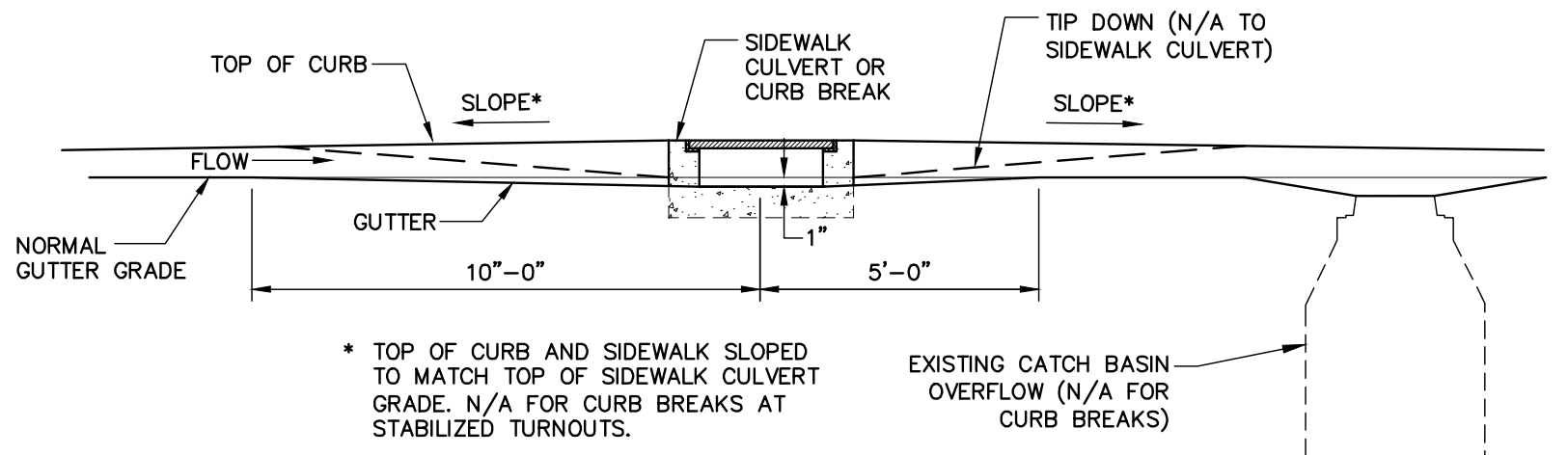
- GROUND PINNING DEVICES**
- METAL PINS SHOULD BE AT LEAST 0.20" DIAMETER STEEL WITH A 1 1/2" STEEL WASHER AT THE HEAD OF THE PIN. METAL PINS SHOULD BE DRIVEN FLUSH TO THE SOIL SURFACE. PINS SHOULD BE BETWEEN 6-24" LONG AND HAVE SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT. LONGER PINS MAY BE REQUIRED FOR LOOSER SOILS. HEAVIER METAL STAKES MAY BE REQUIRED IN ROCKY SOILS.

- SOIL FILLING**
- INSTALLED PYRAMAT SHALL BE RE-SEED AND SOIL-FILLED.
 - AFTER SEEDING, SPREAD AND LIGHTLY RAKE 2" OF FINE SITE SOIL OR TOPSOIL INTO THE MAT AND COMPLETELY FILL THE VOIDS USING BACKSIDE OF RAKE OR OTHER FLAT TOOL.
 - IF EQUIPMENT MUST OPERATE ON THE MAT, MAKE SURE IT IS OF THE RUBBER-TIRED TYPE. NO TRACKED EQUIPMENT OR SHARP TURNS ARE ALLOWED ON THE MAT.
 - AVOID ANY TRAFFIC OVER THE MAT IF LOOSE OR WET SOIL CONDITIONS EXIST.
 - BROADCAST ADDITIONAL SEED AND INSTALL TEMPORARY MATTING NORTH AMERICAN GREEN S150BN OR EQUAL.
 - IRRIGATE AS NECESSARY TO ESTABLISH/MAINTAIN VEGETATION. DO NOT OVER IRRIGATE.

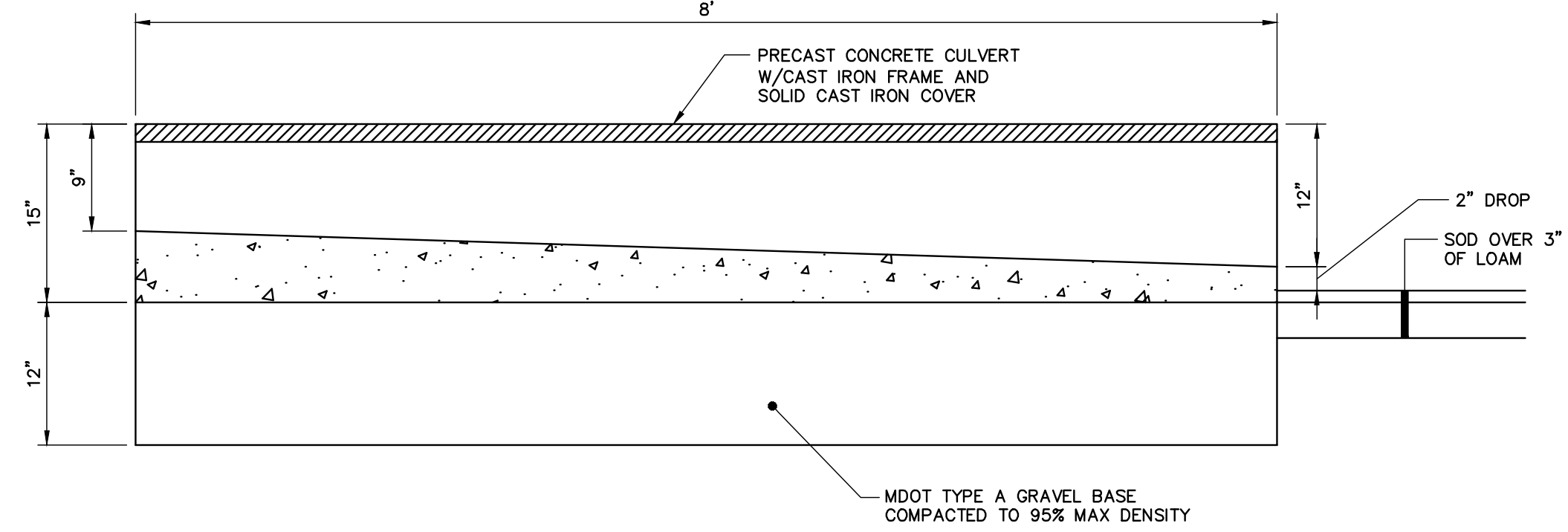
SPILLWAY DETAIL
N.T.S.



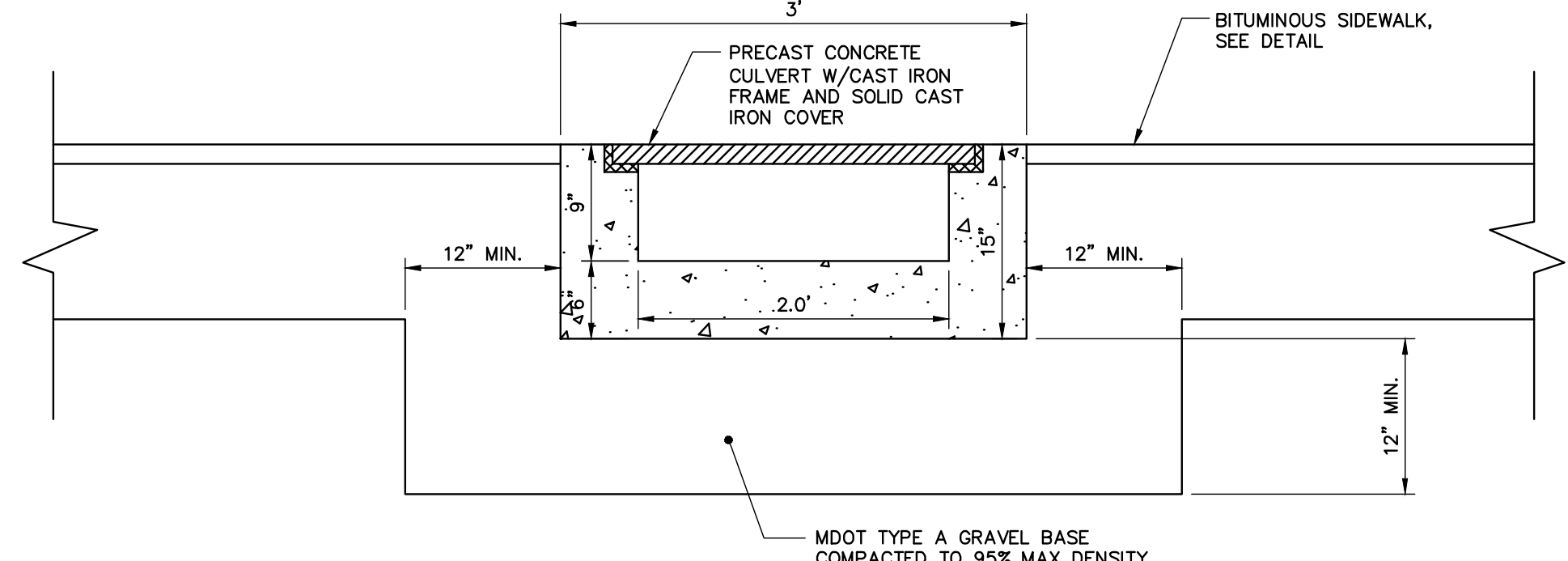
STABILIZED TURNOUT DETAIL
N.T.S.



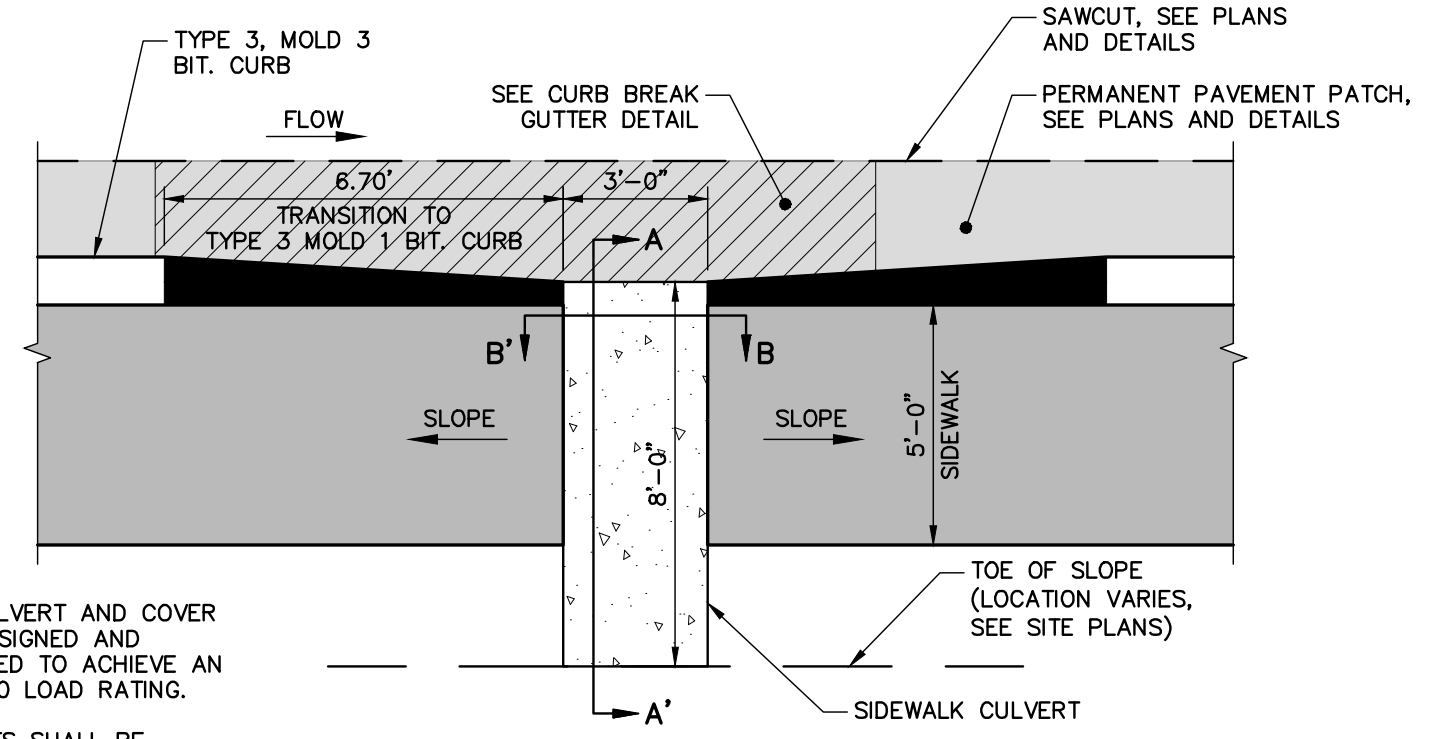
CULVERT/ CURB BREAK GUTTER DETAIL
N.T.S.



SECTION A-A'

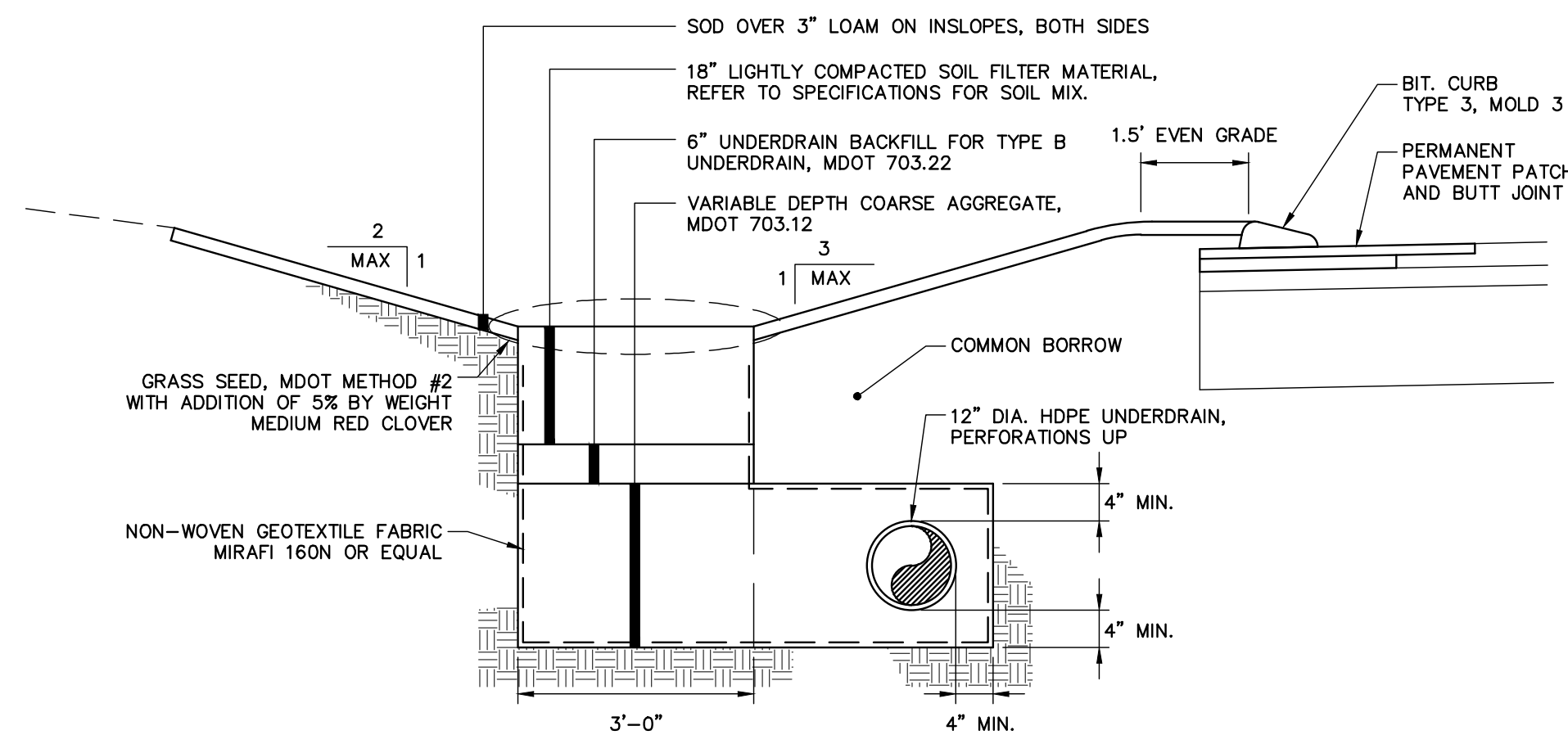


SECTION B-B'

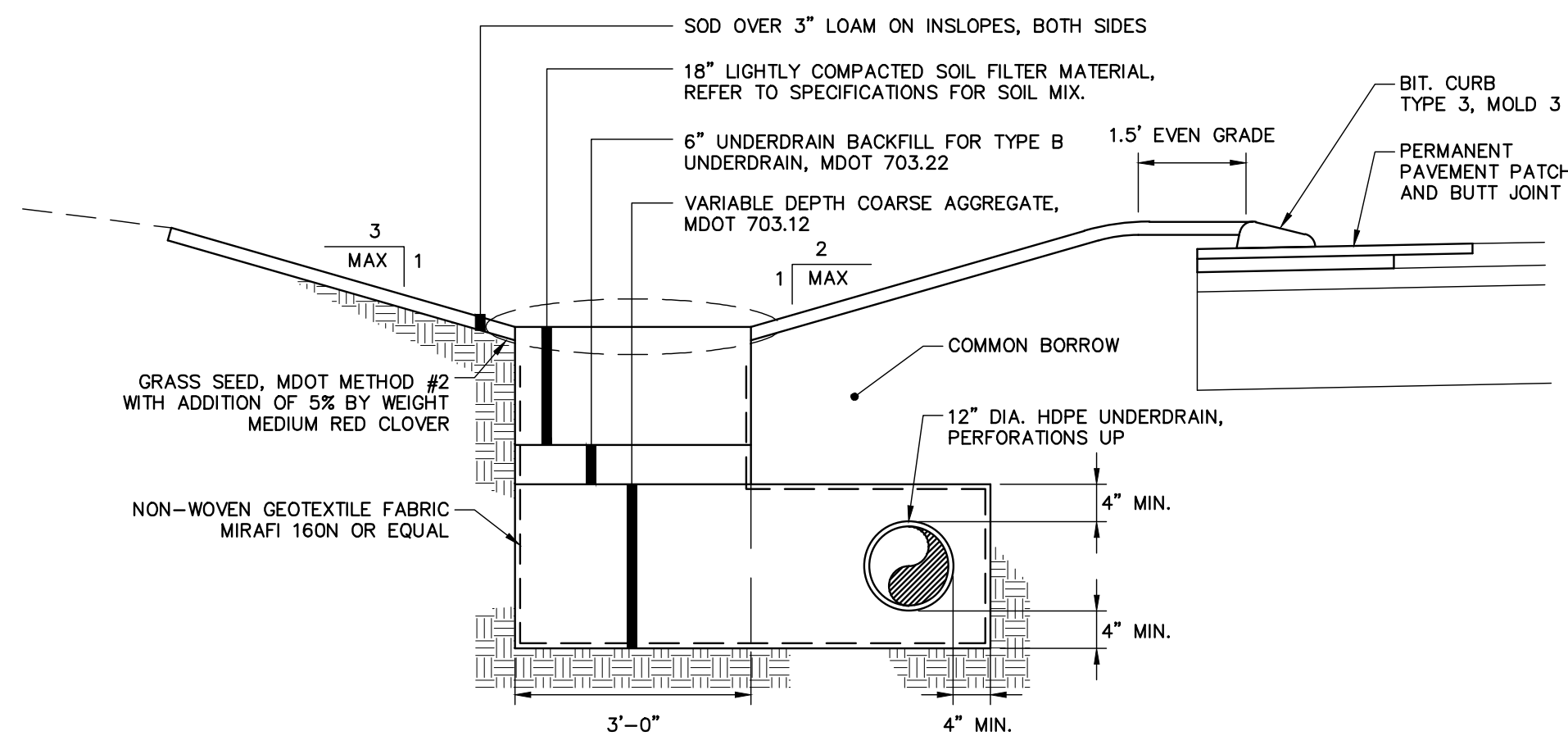


PLAN
SIDEWALK CULVERT DETAIL
N.T.S.

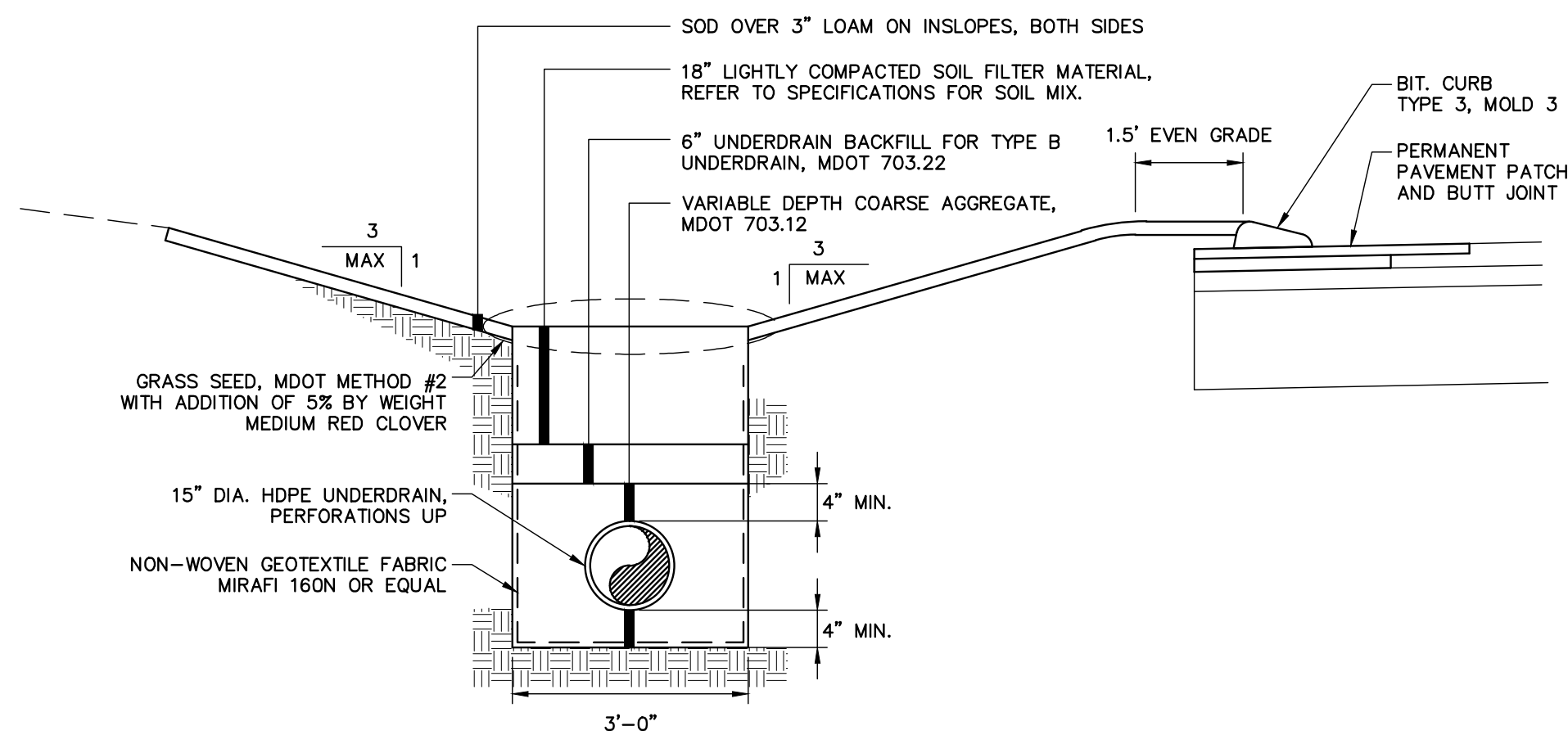
- NOTE:**
- SIDEWALK CULVERT AND COVER SHALL BE DESIGNED AND MANUFACTURED TO ACHIEVE AN AASHTO H-20 LOAD RATING.
 - ALL PRODUCTS SHALL BE MANUFACTURED IN THE UNITED STATES.
 - SIDEWALK CULVERTS BY GEORGE R. ROBERTS COMPANY OR APPROVED EQUAL.



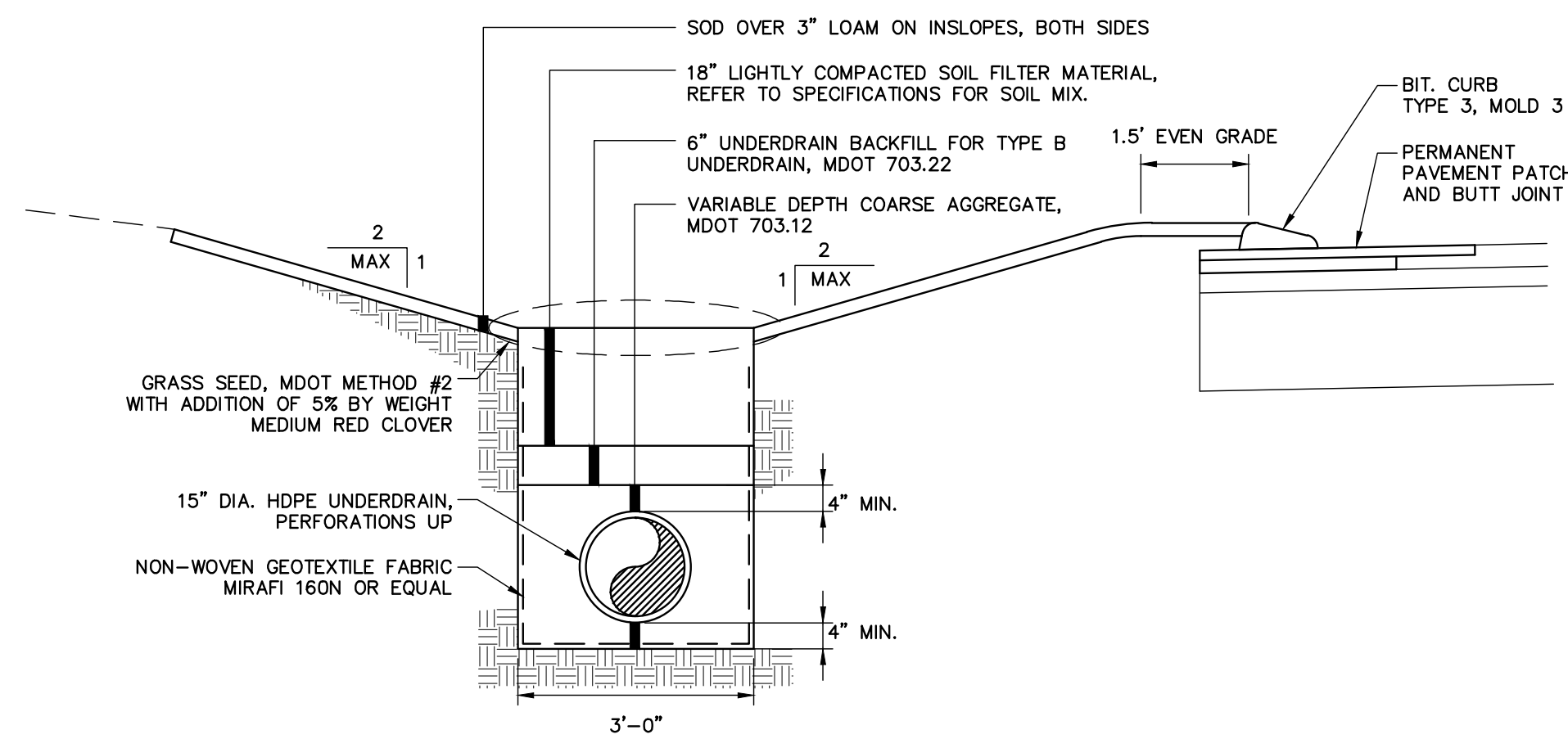
SOIL FILTER #1 TYPICAL SECTION
N.T.S.



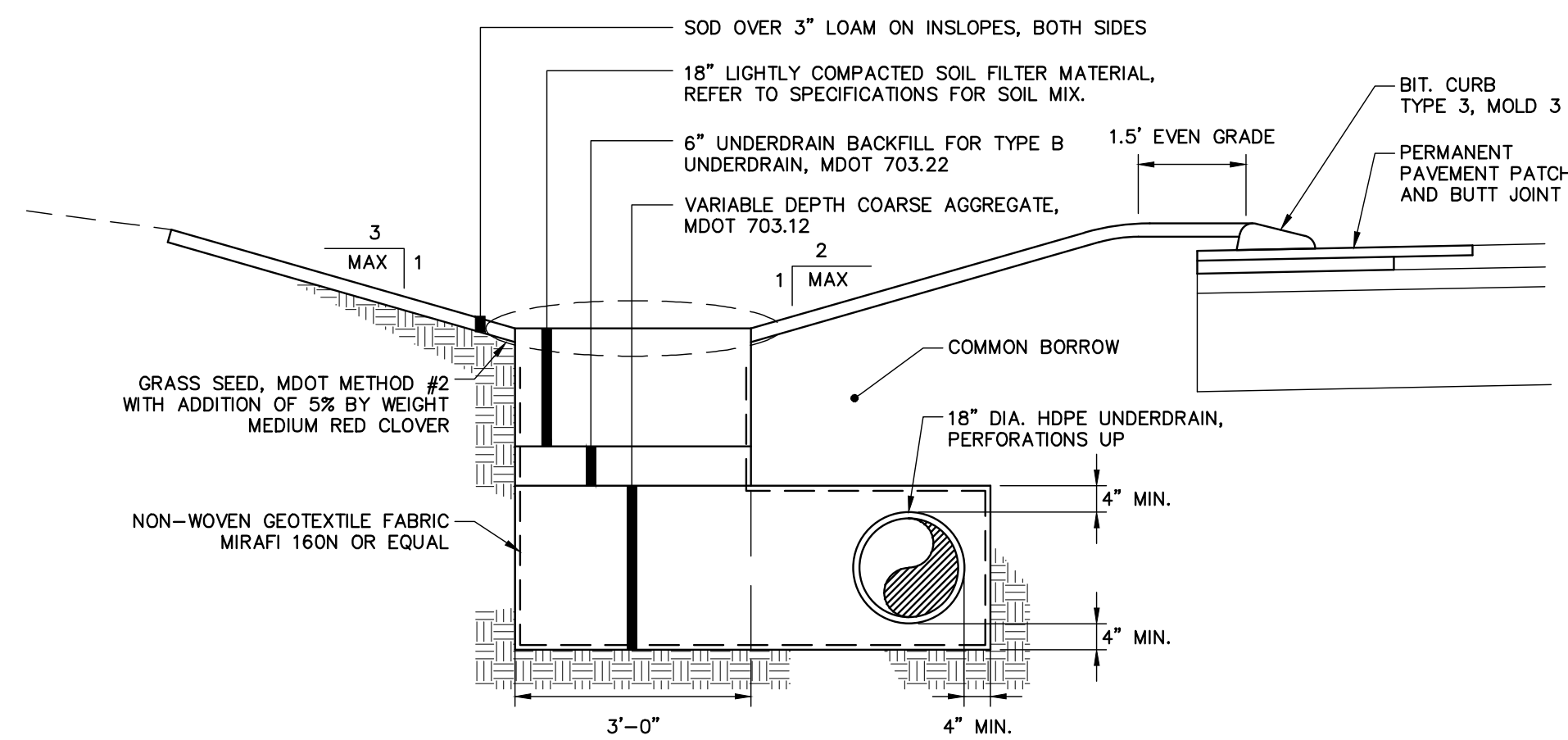
SOIL FILTER #2 TYPICAL SECTION
N.T.S.



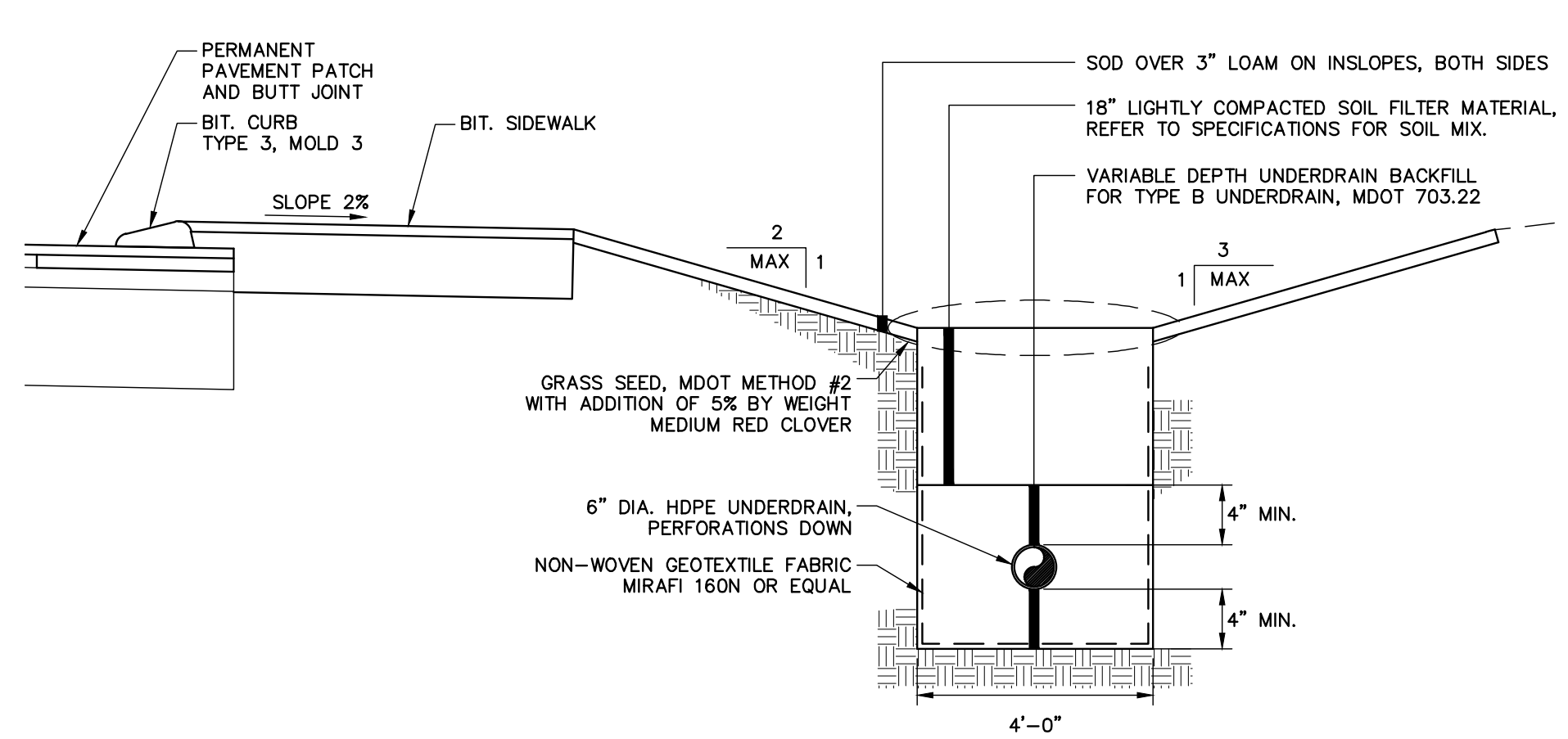
SOIL FILTER #3 TYPICAL SECTION
N.T.S.



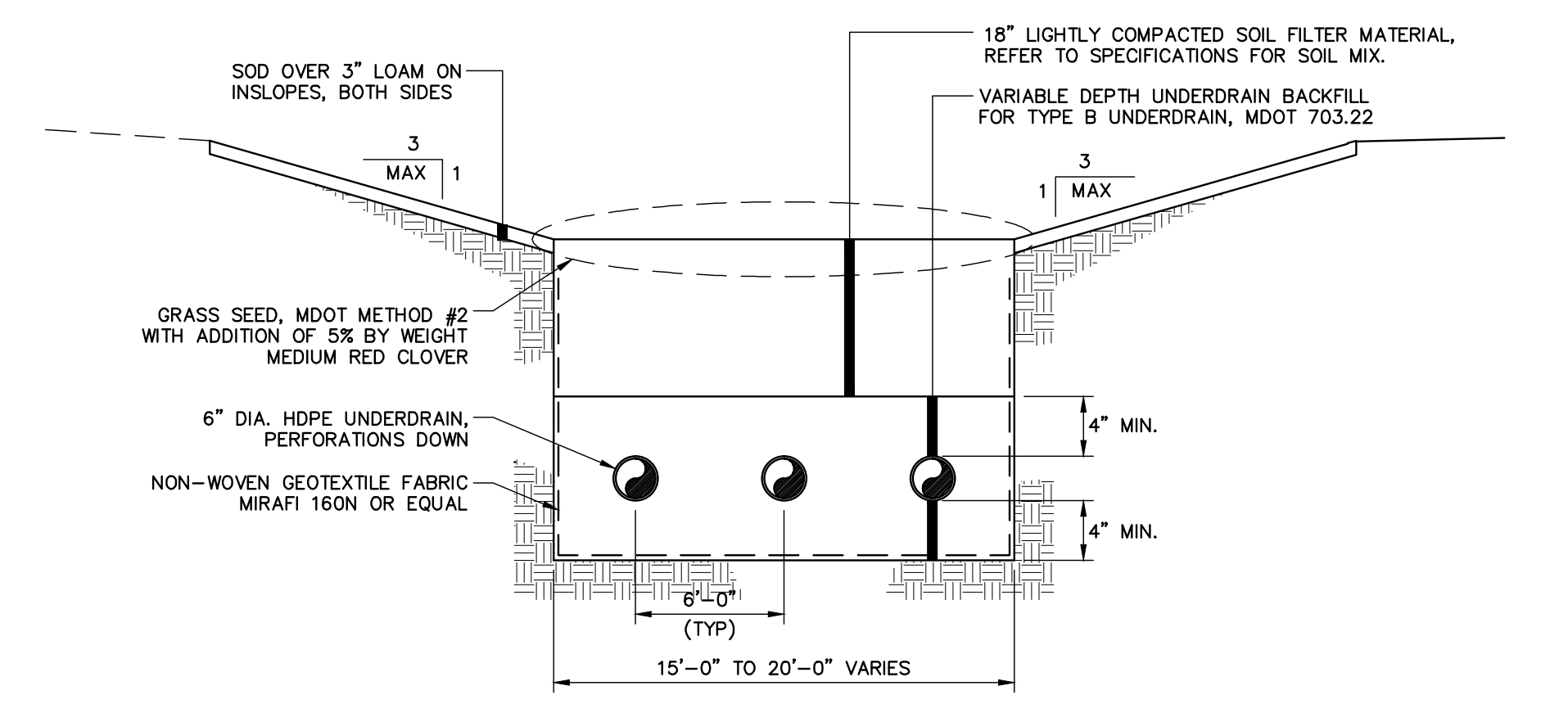
SOIL FILTER #4 TYPICAL SECTION
N.T.S.



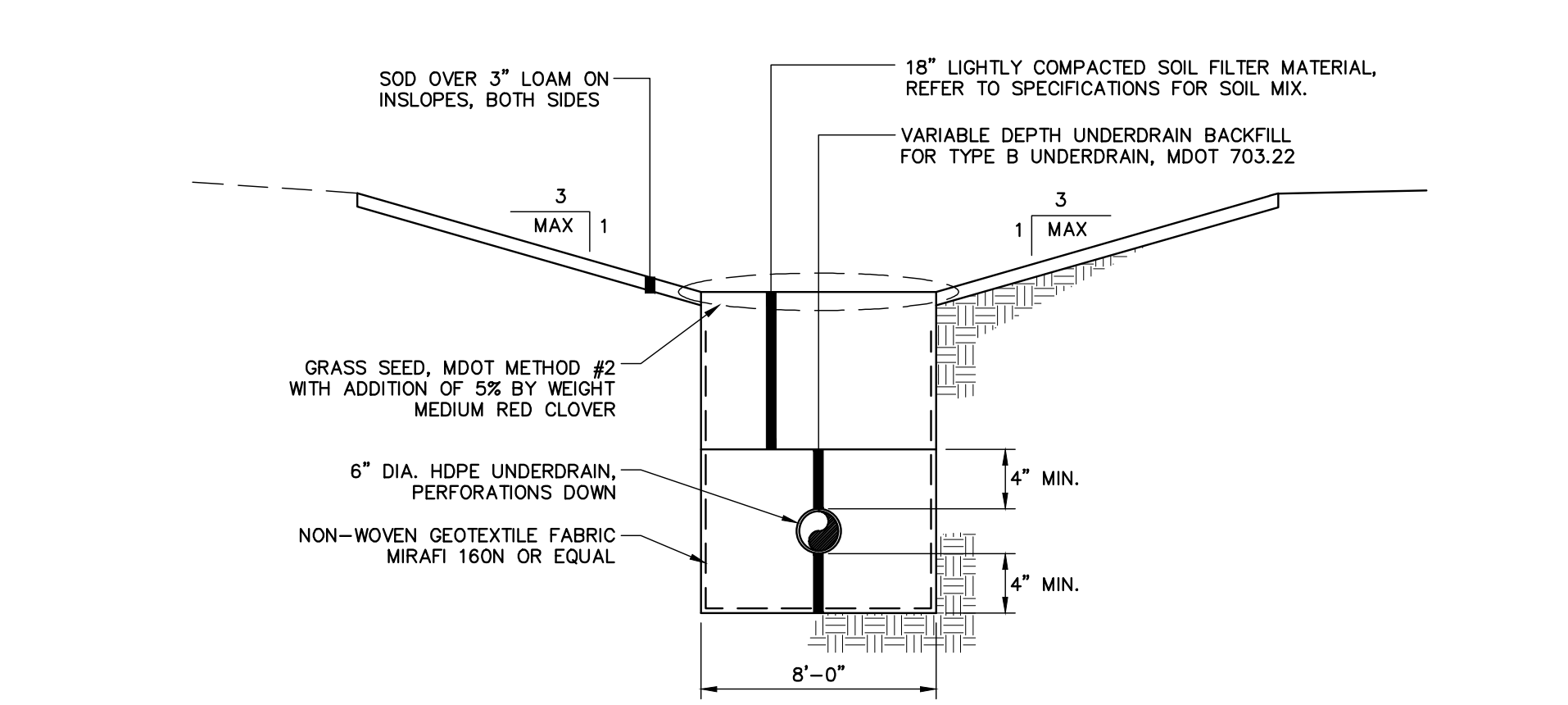
SOIL FILTER #5 TYPICAL SECTION
N.T.S.



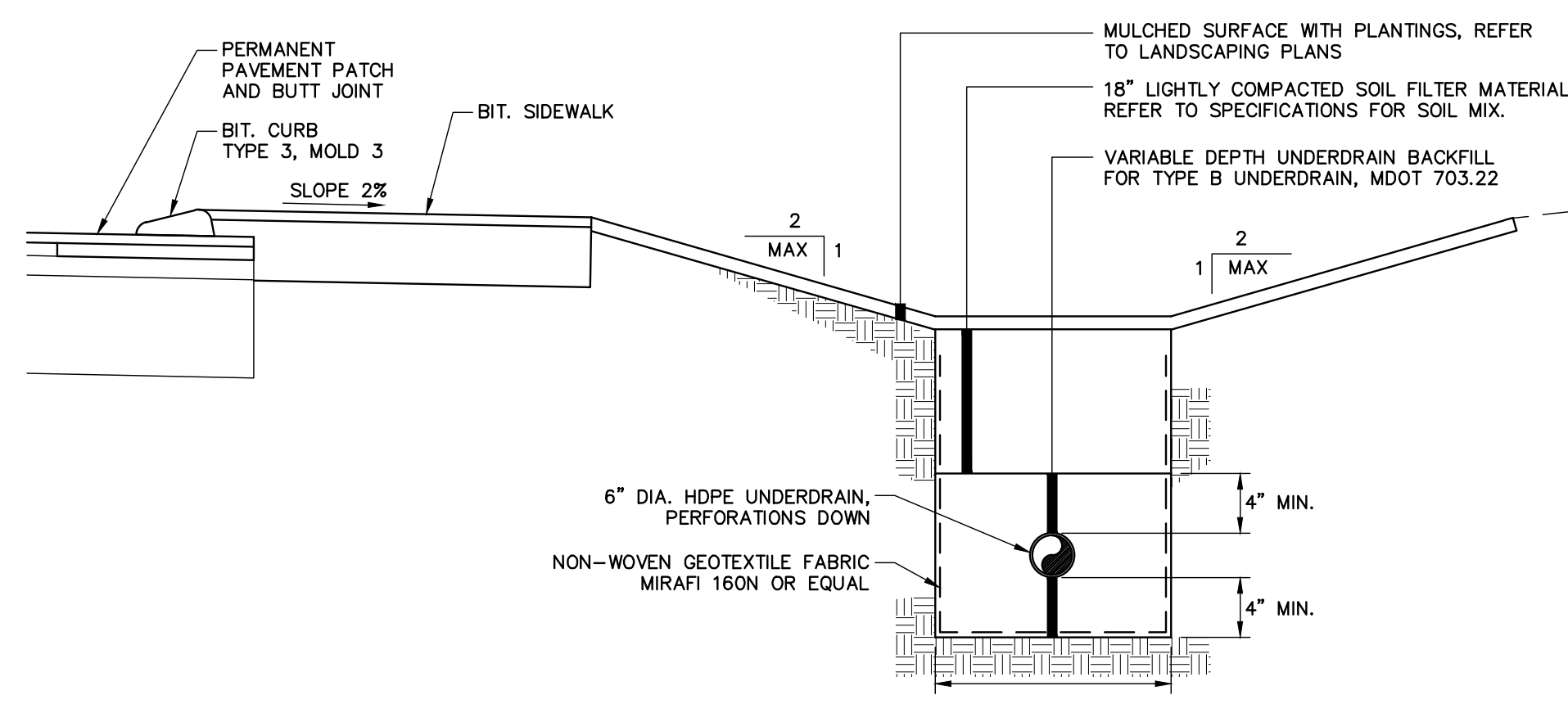
SOIL FILTER #6 TYPICAL SECTION
N.T.S.



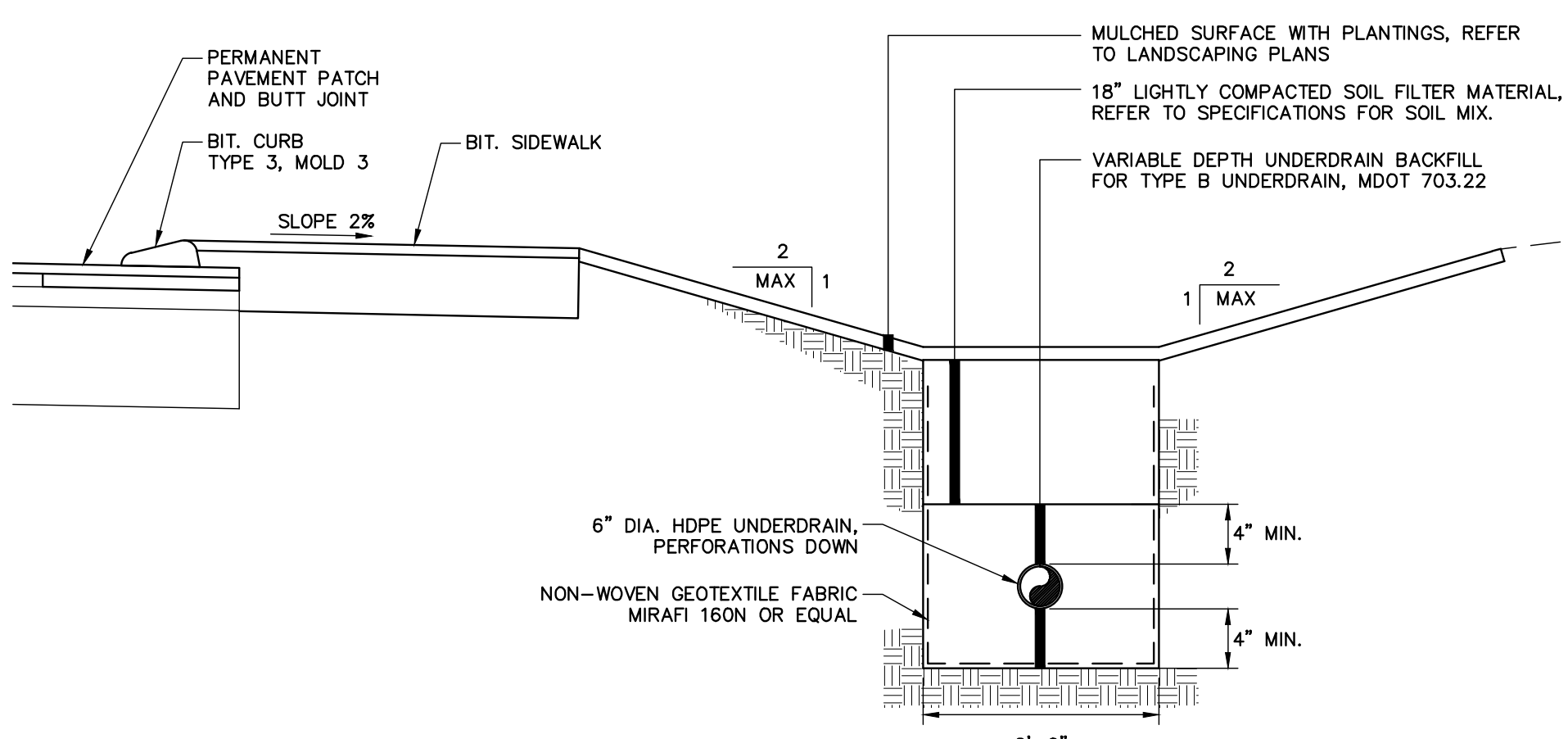
SOIL FILTER #7 TYPICAL SECTION
N.T.S.



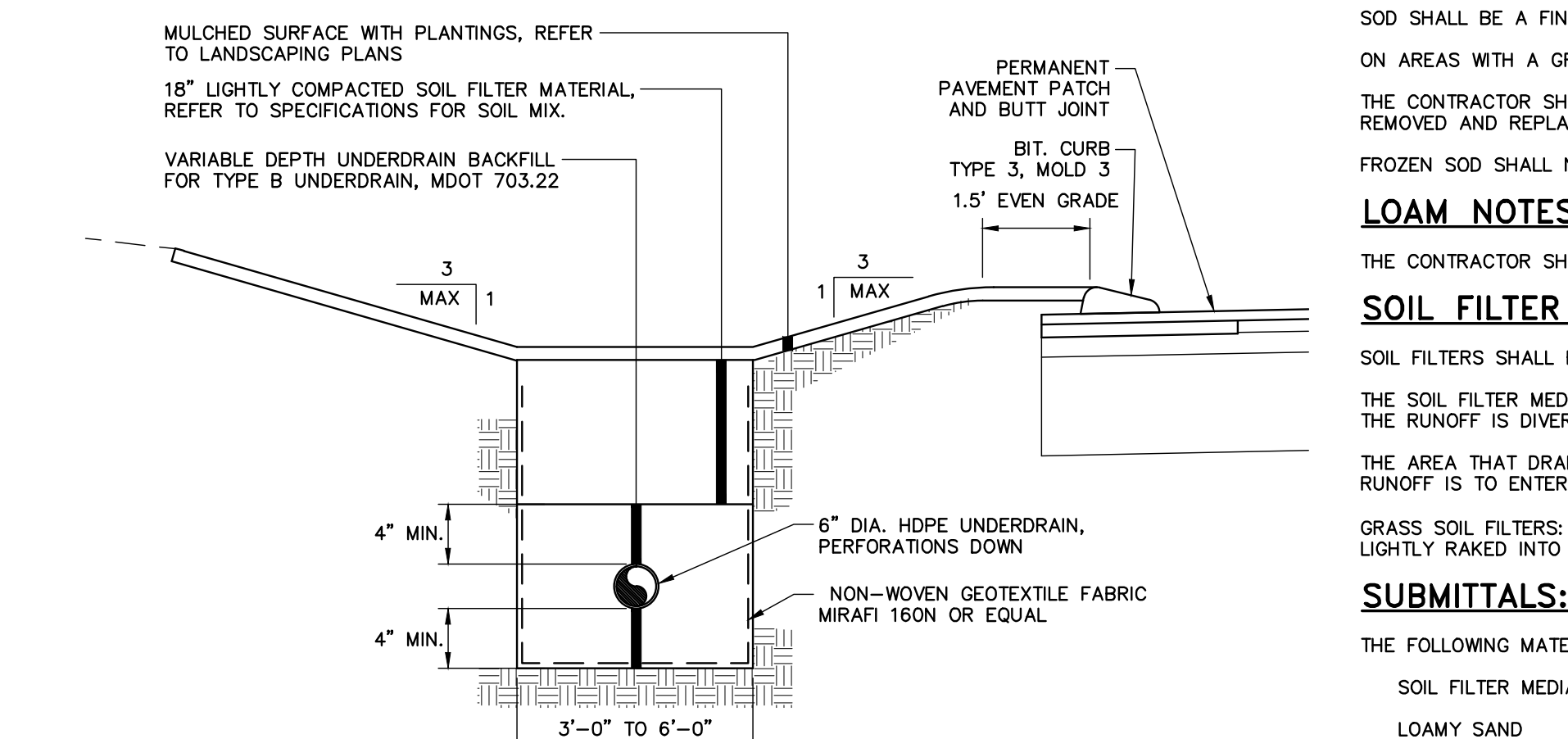
SOIL FILTER #8 TYPICAL SECTION
N.T.S.



LANDSCAPED SOIL FILTER #1 TYPICAL SECTION
N.T.S.



LANDSCAPED SOIL FILTER #2 TYPICAL SECTION
N.T.S.



LANDSCAPED SOIL FILTER #3 TYPICAL SECTION
N.T.S.

SOD NOTES:

SOD SHALL BE A FINE FESCUE.
ON AREAS WITH A GRADIENT OF 2:1 OR STEEPER, SOD SHALL BE ANCHORED WITH WOODEN PEGS AND AS DIRECTED IN SECTION 616, MAINDOT STANDARD SPECIFICATIONS.
THE CONTRACTOR SHALL WATER THE SOD AS NECESSARY AND SHALL INSURE CONTINUED GROWTH OF THE SOD. SOD NOT SURVIVING FOR 3 MONTHS AFTER INSTALLATION SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
FROZEN SOD SHALL NOT BE USED NOR SHALL SOD BE PLACED ON FROZEN SOIL.

LOAM NOTES:

THE CONTRACTOR SHALL SUBMIT LOAM TESTING RESULTS IN CONFORMANCE WITH SECTION 615, MAINDOT STANDARD SPECIFICATIONS.

SOIL FILTER NOTES:

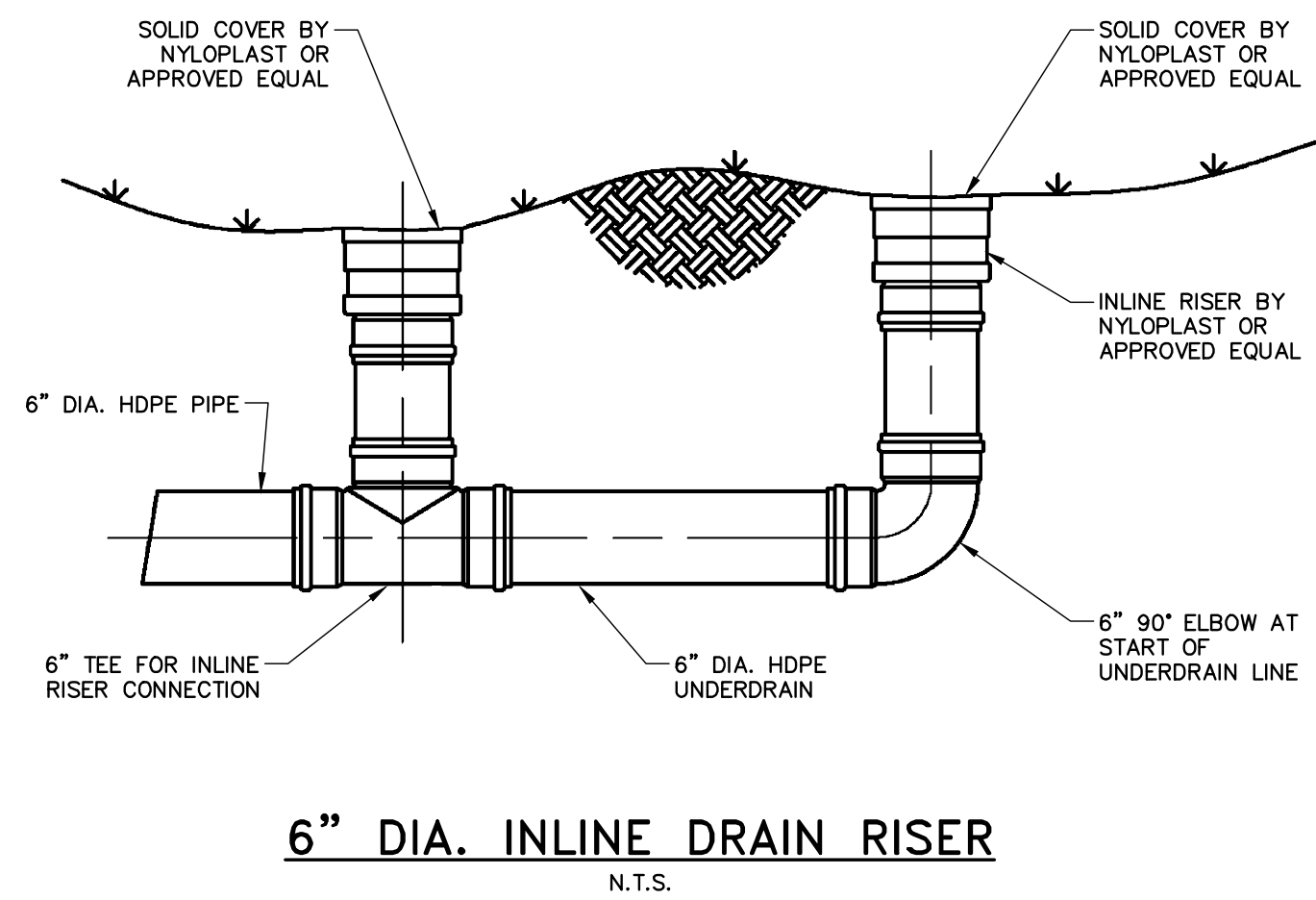
SOIL FILTERS SHALL BE CONSTRUCTED IN CONFORMANCE WITH SECTION 900 OF THE SUPPLEMENTAL SPECIFICATIONS.
THE SOIL FILTER MEDIA MUST NOT BE INSTALLED UNTIL THE ENTIRE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURES UNLESS THE RUNOFF IS DIVERTED AROUND THE FILTER.
THE AREA THAT DRAINS TO THE SOIL FILTER SHALL BE KEPT STABLE, AVOIDING EROSION AND DEPOSITION OF SEDIMENTS INTO THE STORMWATER MANAGEMENT SYSTEM. ABSOLUTELY NO RUNOFF IS TO ENTER THE FILTER UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN SUFFICIENTLY STABILIZED.
GRASS SOIL FILTERS: ADDITIONAL SURFACE LOAM MAY BE UTILIZED TO PROMOTE GRASS SEED GERMINATION. LOAM SHALL CONSIST OF NO MORE THAN 1/2 DEPTH OF NATIVE SANDY LOAM LIGHTLY RAKED INTO THE SOIL FILTER SURFACE.

SUBMITTALS:

THE FOLLOWING MATERIAL SHALL BE SUBMITTED:
SOIL FILTER MEDIA
LOAMY SAND
SUBMIT 5 LBS. SAMPLE OF EACH TYPE OF MATERIAL IN AIR TIGHT CONTAINER TO PROJECT ENGINEER.
CONTRACTOR SHALL PERFORM A SIEVE ANALYSIS IN CONFORMANCE WITH ASTM C136 - STANDARD TEST METHOD FOR SIEVE ANALYSIS AND ASTM C117 - STANDARD TEST METHOD FOR MATERIALS FINER THAN 75µm ON EACH TYPE OF MATERIAL AND SUBMIT RESULTS TO PROJECT ENGINEER.
CONTRACTOR SHALL PERFORM A SOIL TEXTURAL ANALYSIS FOR LOAMY SAND IN CONFORMANCE WITH ASTM D422 - STANDARD TEST METHOD FOR PARTICLE-SIZE ANALYSIS OF SOILS AND SUBMIT RESULTS TO PROJECT ENGINEER.
CONTRACTOR SHALL PROVIDE ALL OTHER PRODUCT DATA SUBMITTAL REQUIREMENTS IN CONFORMANCE WITH SECTION 900.03 OF THE SUPPLEMENTAL SPECIFICATIONS.

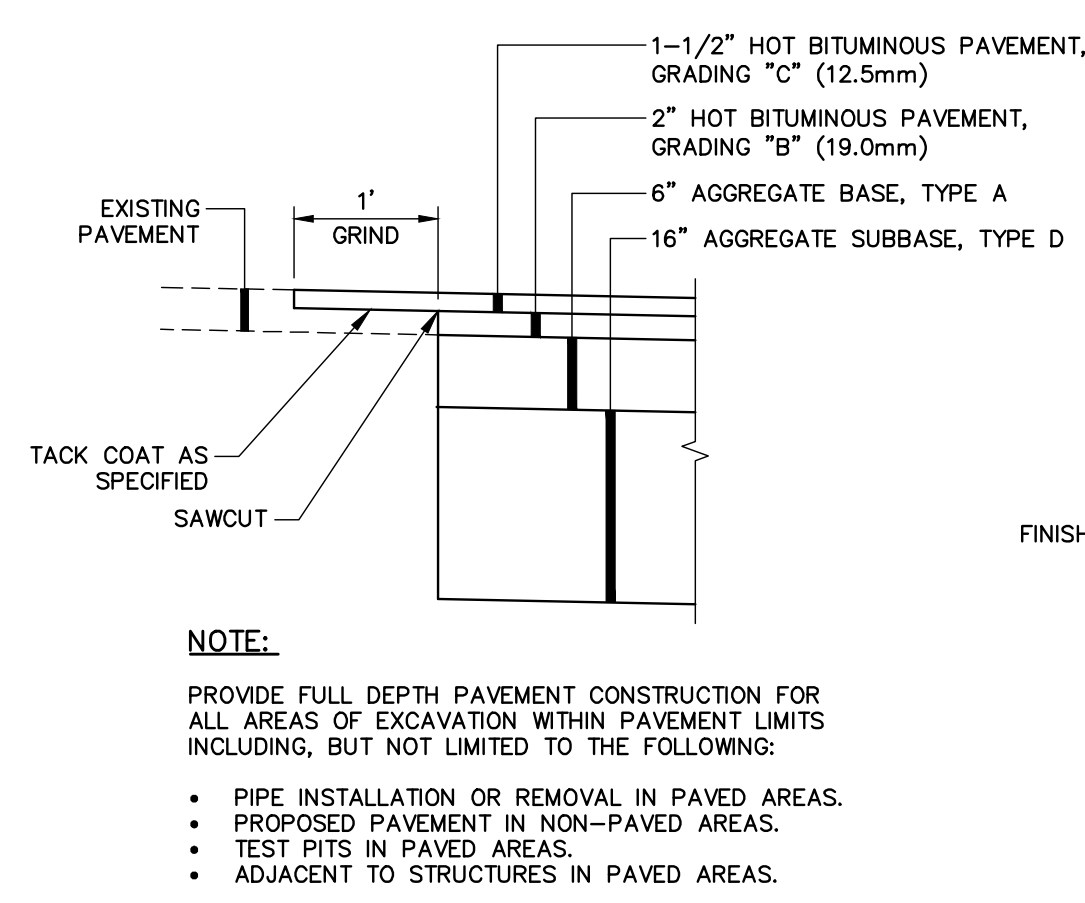
DAS
22209102-C300A-AS-BUIL.DWG
JBC

CIVIL DETAILS - 3



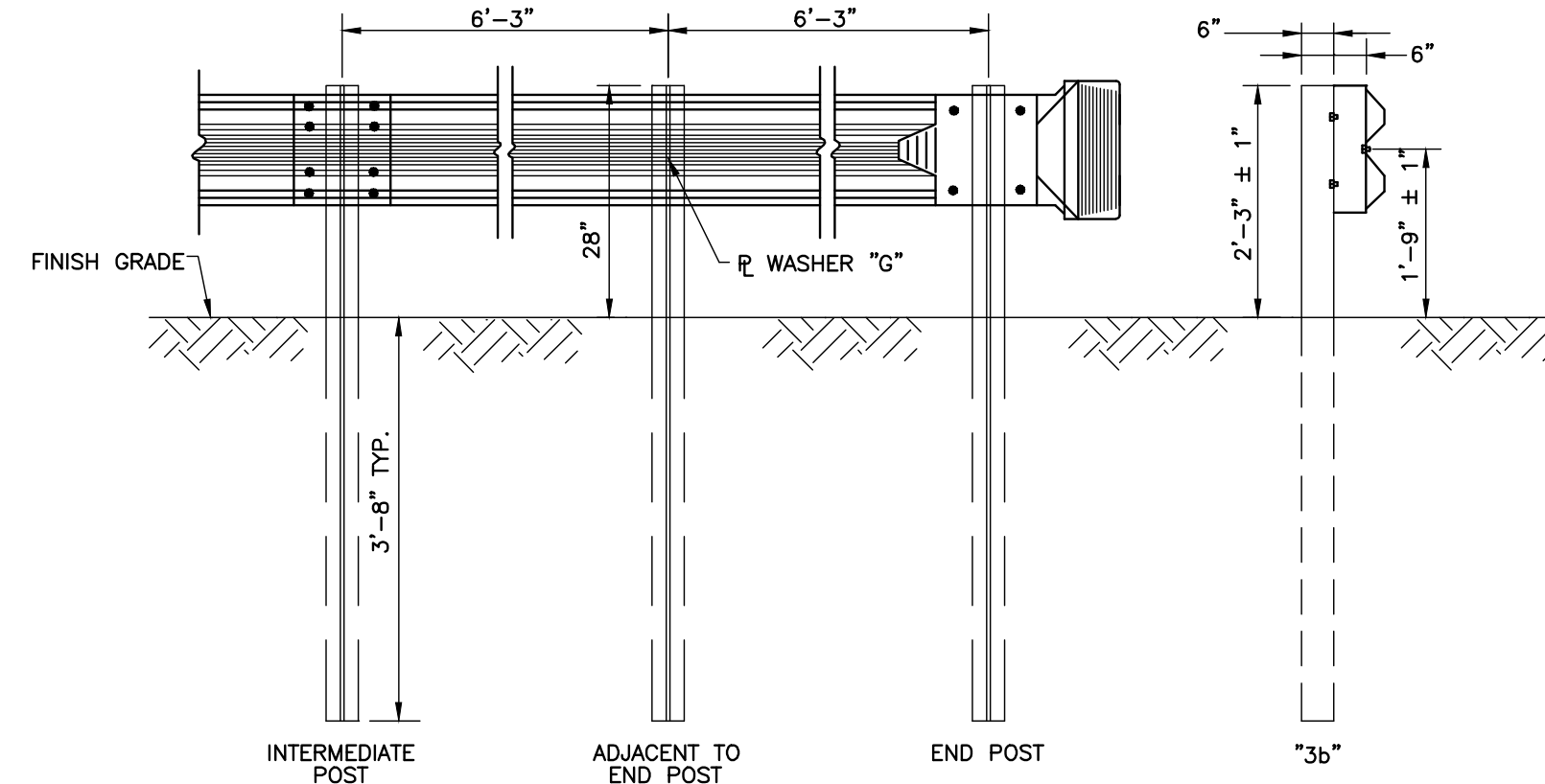
6" DIA. INLINE DRAIN RISER

N.T.S.



FULL DEPTH PAVEMENT CONSTRUCTION DETAIL

N.T.S.

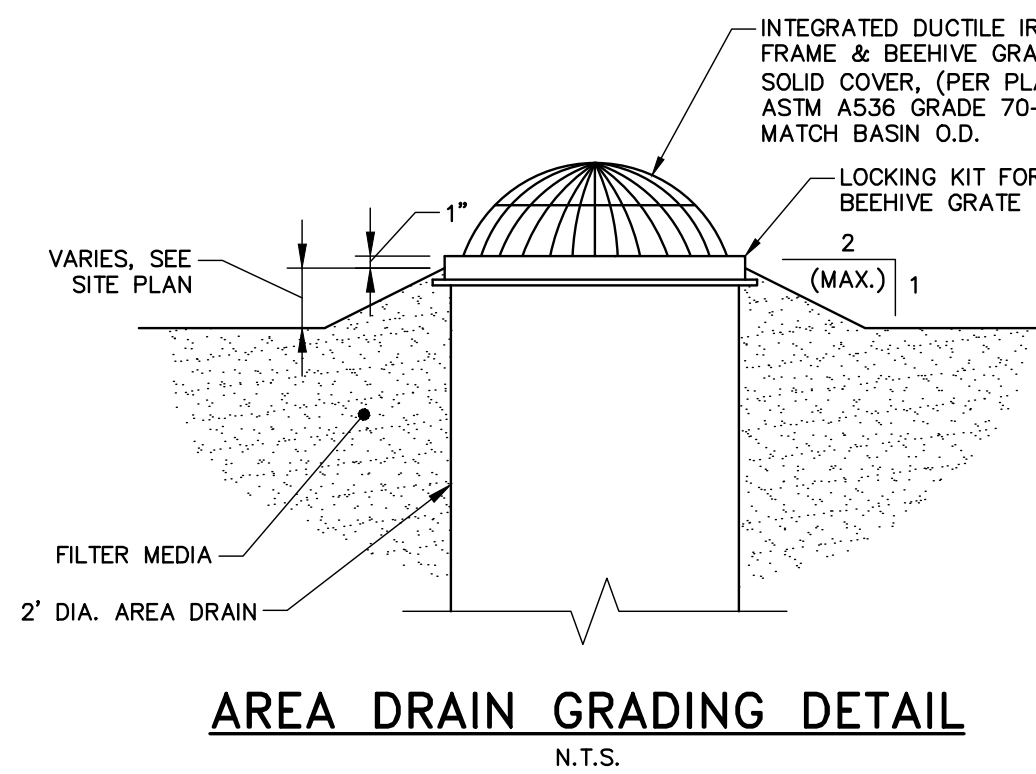


NOTES:

- ALL POST SPACING SHALL BE 6'-3" UNLESS OTHERWISE DIRECTED BY ENGINEER.
- GUARDRAIL SHALL BE MDOT SPECIFICATION TYPE "3b" POSTS AND SHALL CONFORM TO MDOT SPECIFICATION SECTION 710.07(b).
- ALL HOLES IN BEAM SHALL BE SHOP-PUNCHED BEFORE GALVANIZING.

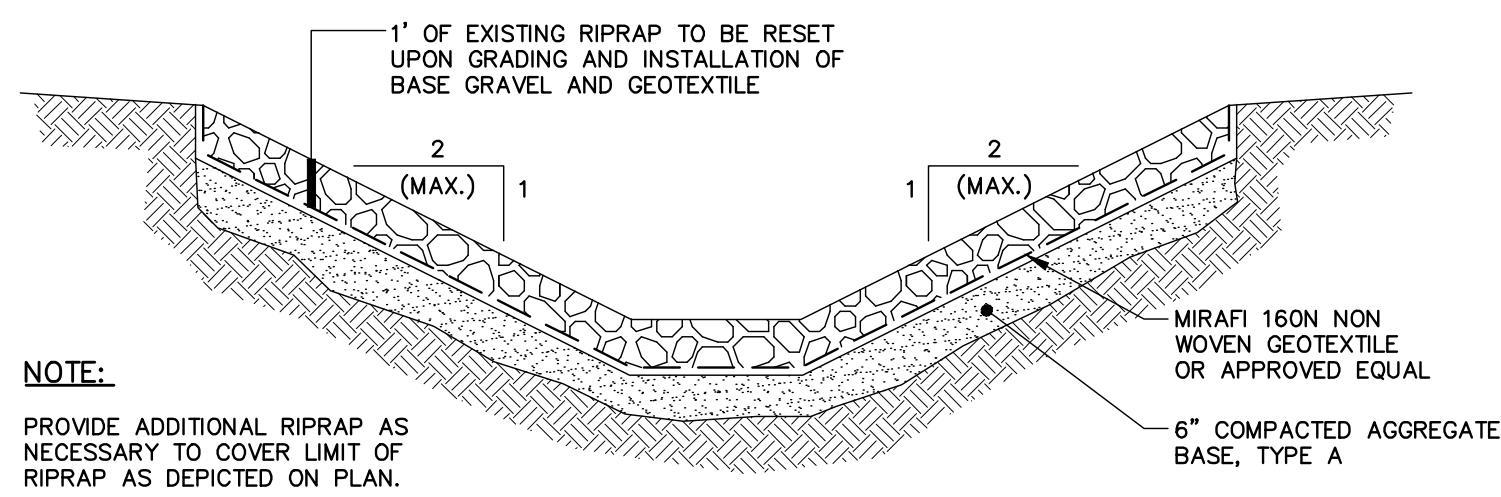
GALVANIZED STEEL GUARDRAIL

N.T.S.



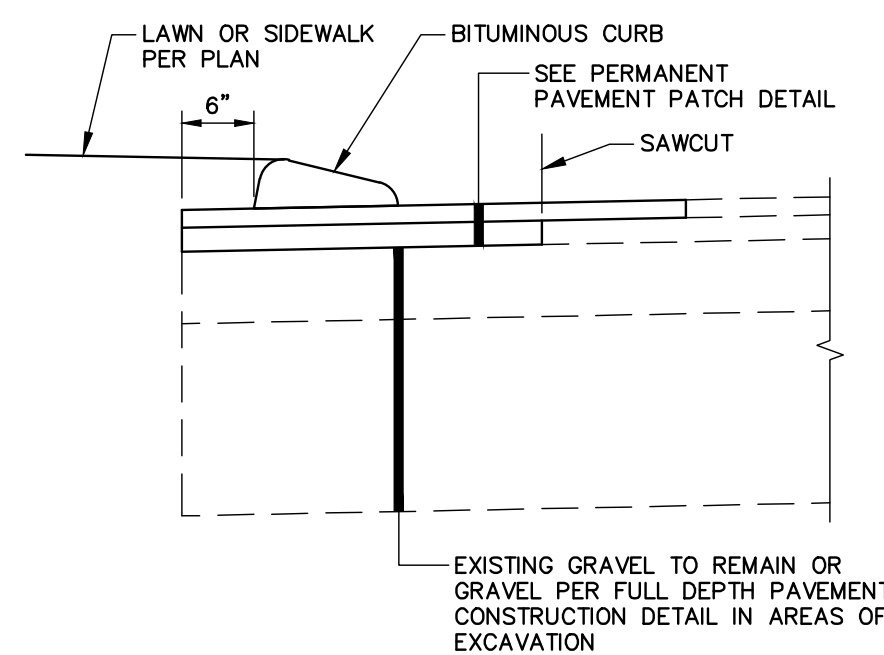
AREA DRAIN GRADING DETAIL

N.T.S.



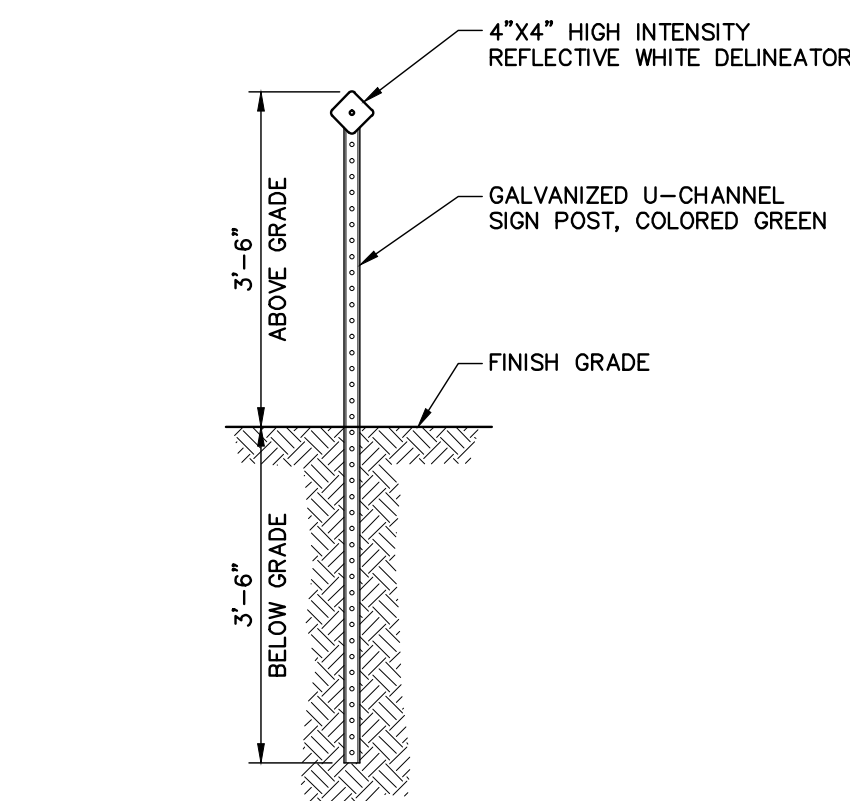
RIPRAP OUTLET PROTECTION DETAIL

N.T.S.



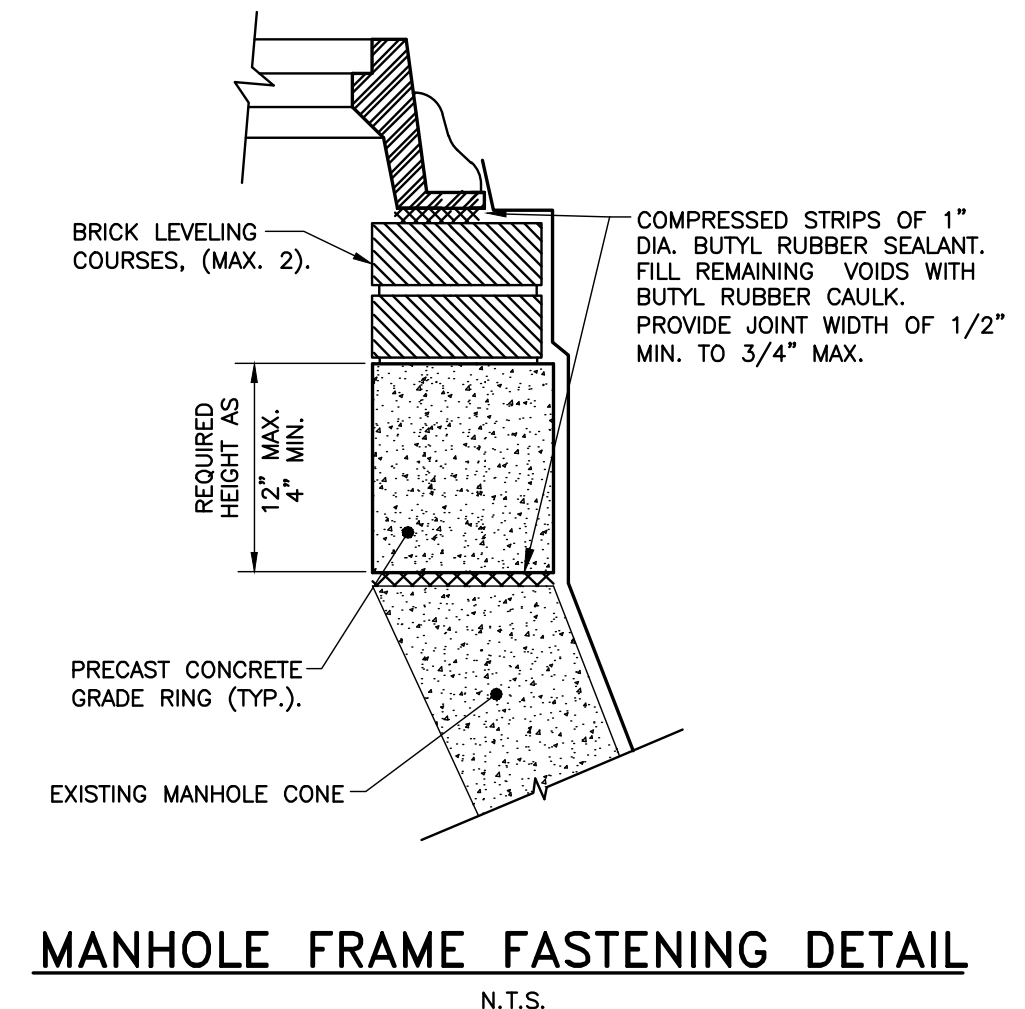
CURB INSTALLATION DETAIL

N.T.S.



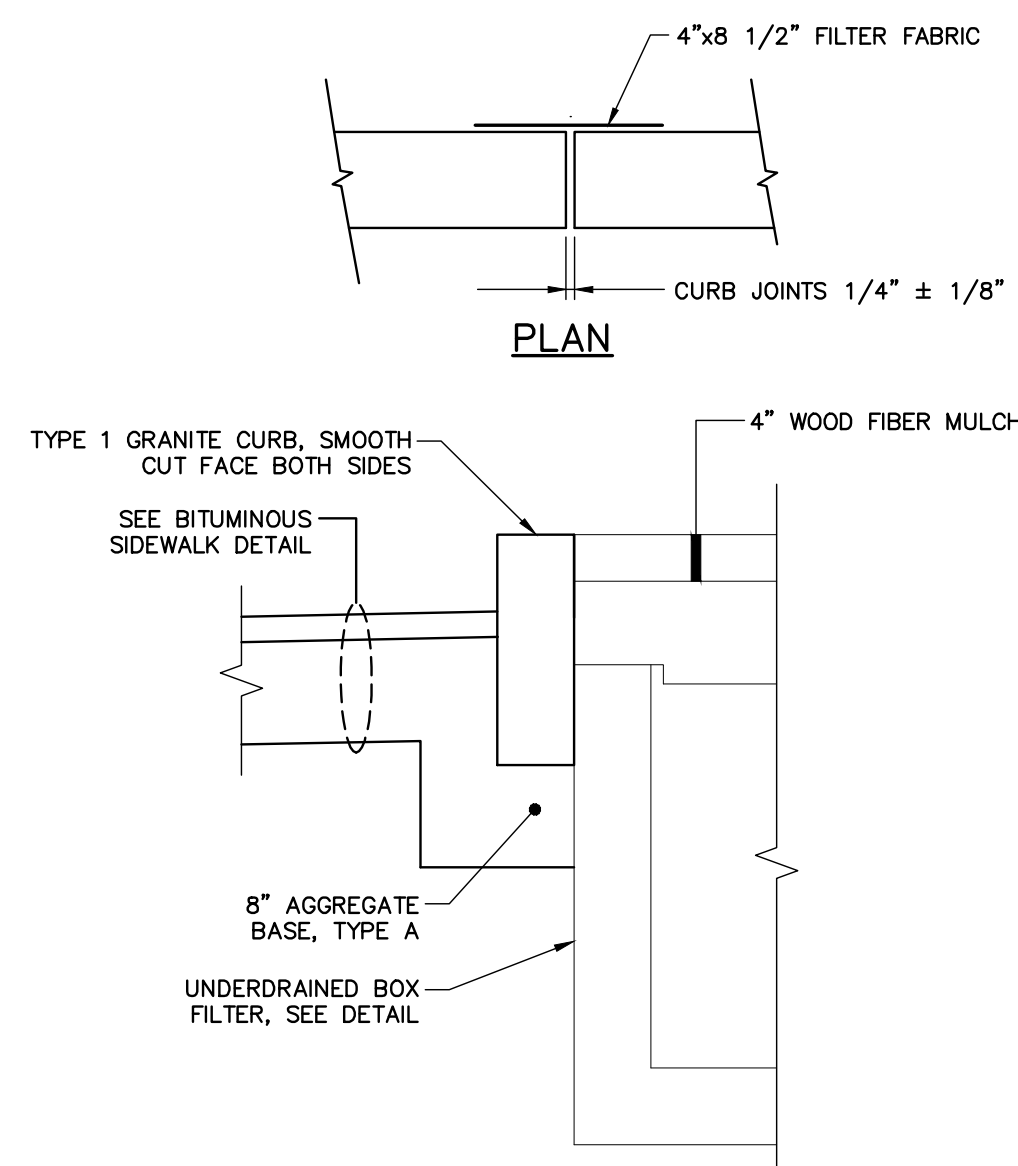
DELINEATOR POST DETAIL

N.T.S.



MANHOLE FRAME FASTENING DETAIL

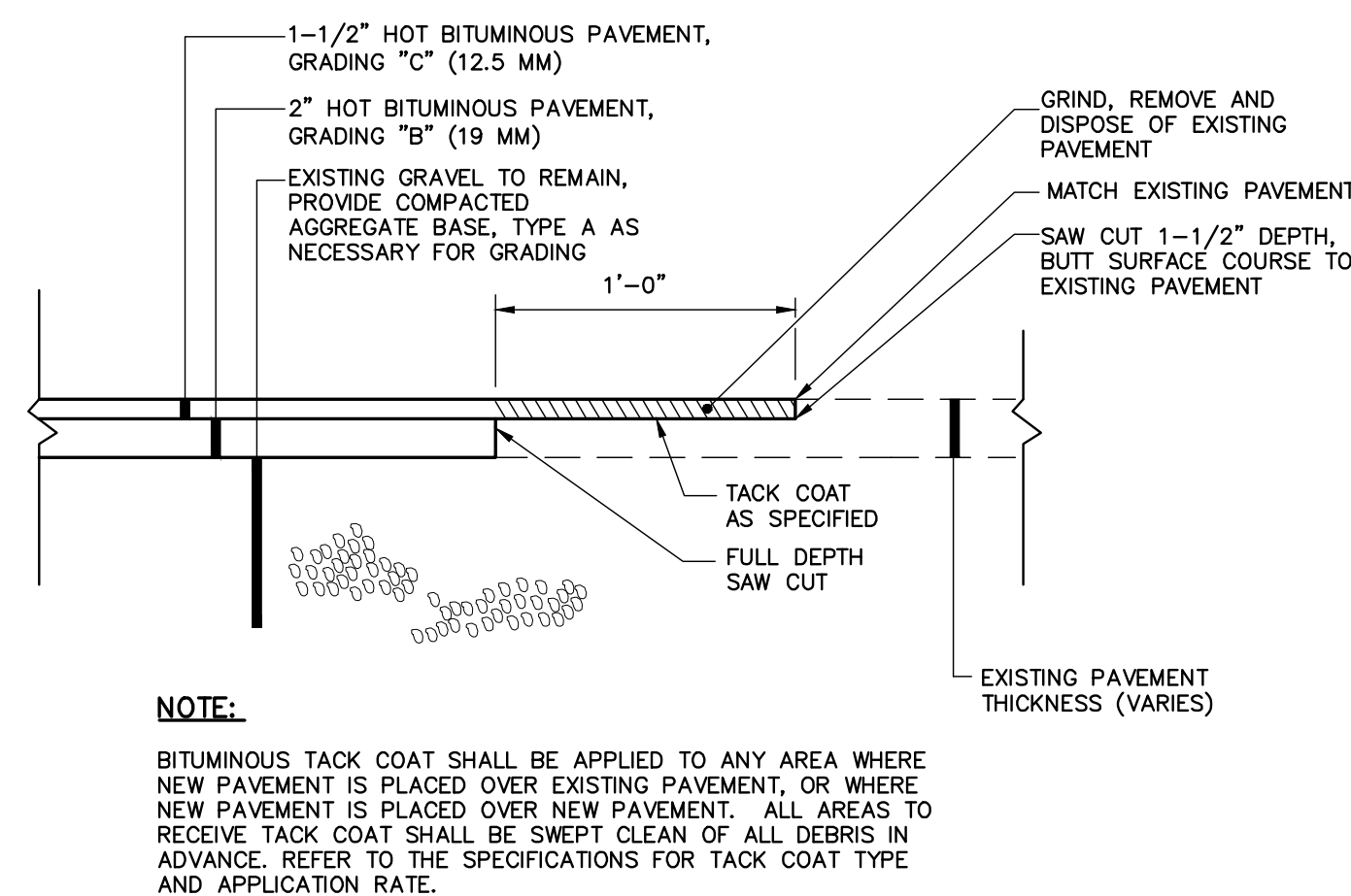
N.T.S.



TYPE 1 CURB INSTALLATION AT UNDERDRAINED BOX FILTER UNITS #1 AND #2

N.T.S.

NOTE: AGGREGATE TYPES PER MDOT SECTION 304.02

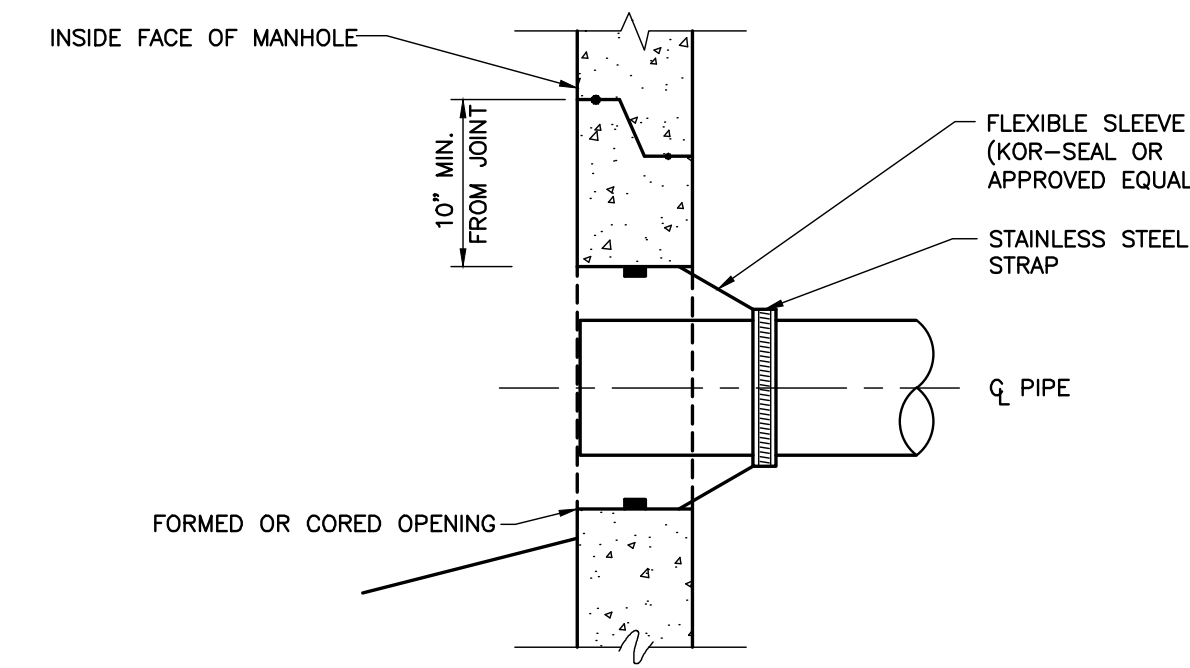


PERMANENT PAVEMENT PATCH AND BUTT JOINT DETAIL

N.T.S.

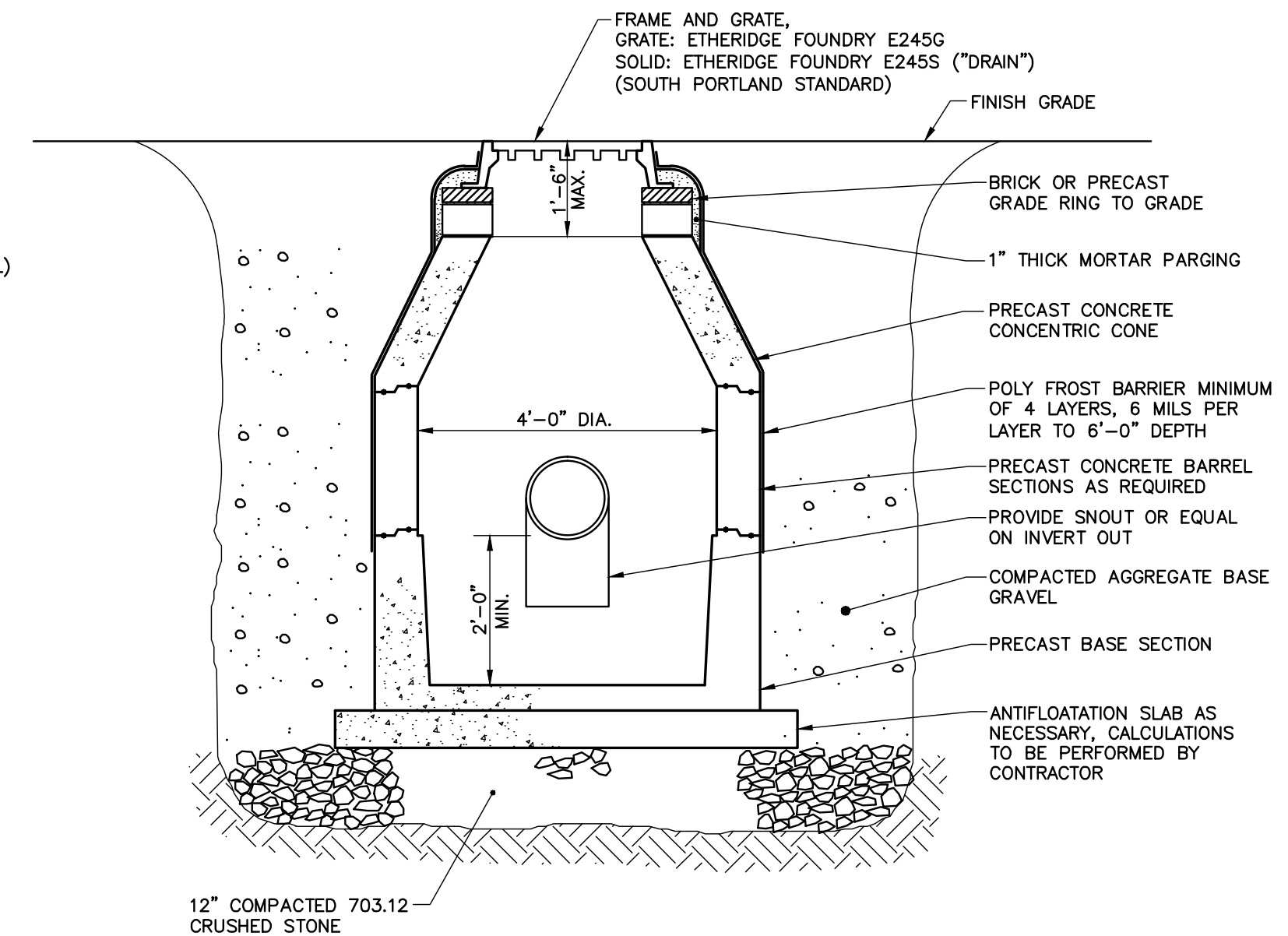
NOTE:

BITUMINOUS TACK COAT SHALL BE APPLIED TO ANY AREA WHERE NEW PAVEMENT IS PLACED OVER EXISTING PAVEMENT, OR WHERE NEW PAVEMENT IS PLACED OVER NEW PAVEMENT. ALL AREAS TO RECEIVE TACK COAT SHALL BE SWEEPED CLEAN OF ALL DEBRIS IN ADVANCE. REFER TO THE SPECIFICATIONS FOR TACK COAT TYPE AND APPLICATION RATE.



NEW PIPE TO MANHOLE/CATCH BASIN

N.T.S.

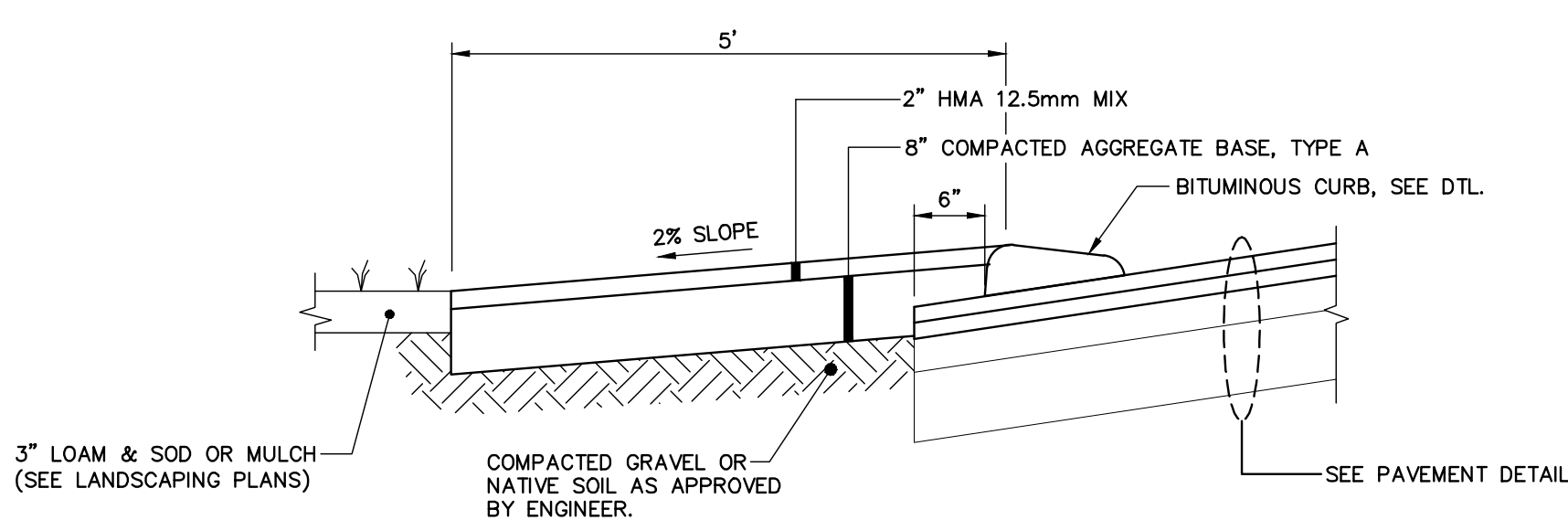


TYPICAL PRECAST CATCH BASIN

N.T.S.

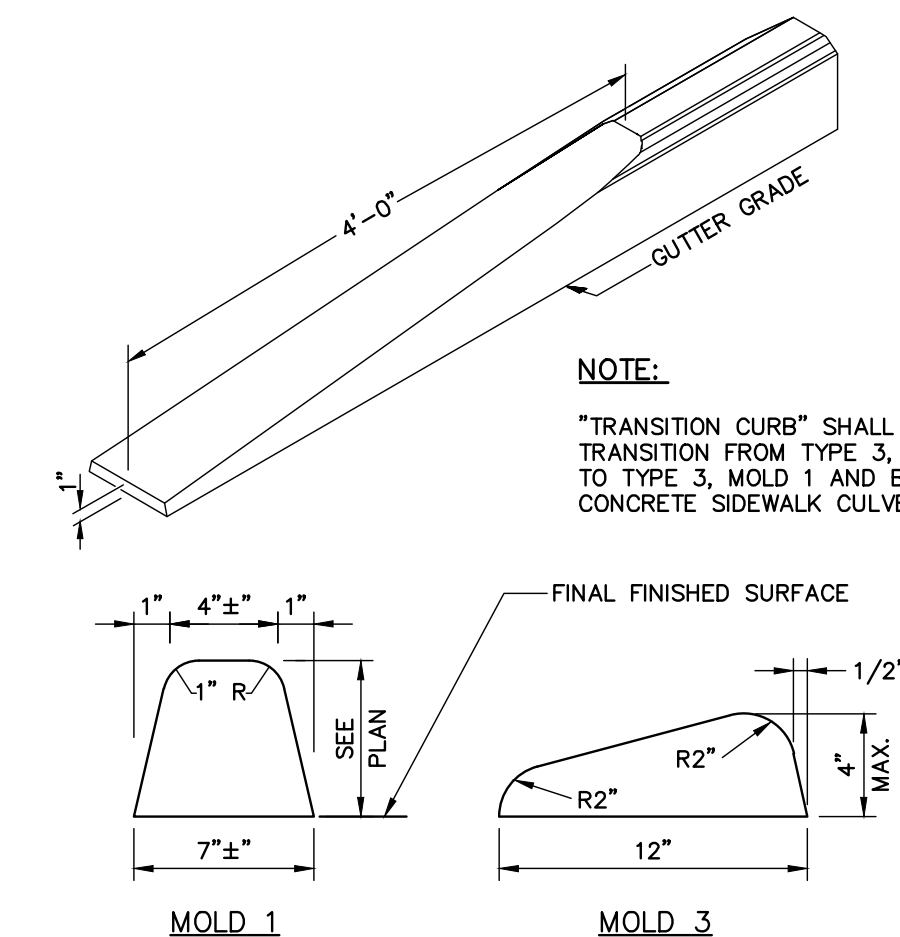
NOTE:

AREA DRAIN TO BE NYLOPLAST 24" DIA. CUSTOM DRAIN BASIN OR APPROVED EQUAL.



BITUMINOUS SIDEWALK DETAIL

N.T.S.

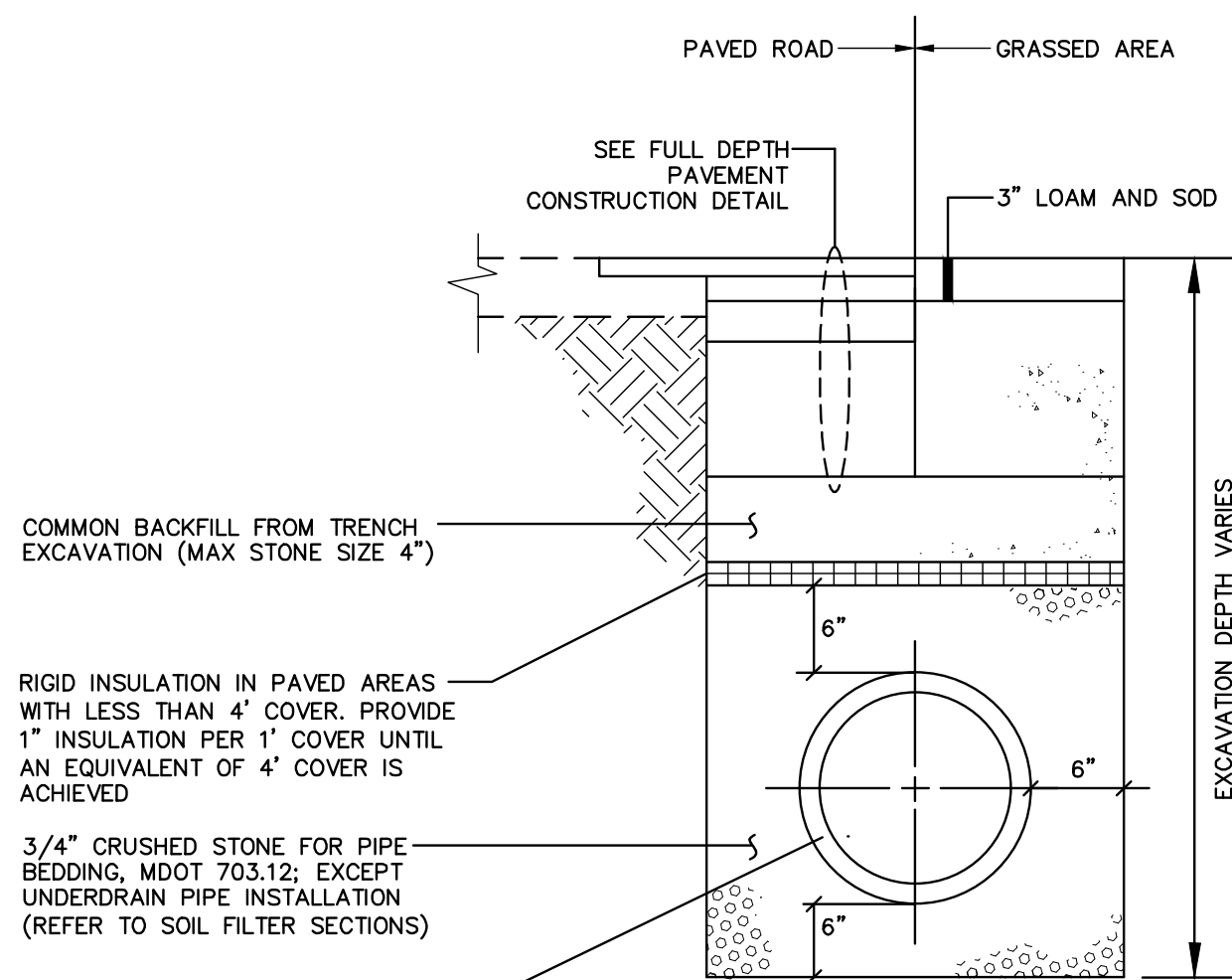


TYPE 3 BITUMINOUS CURB TIP DOWN

N.T.S.

NOTE:

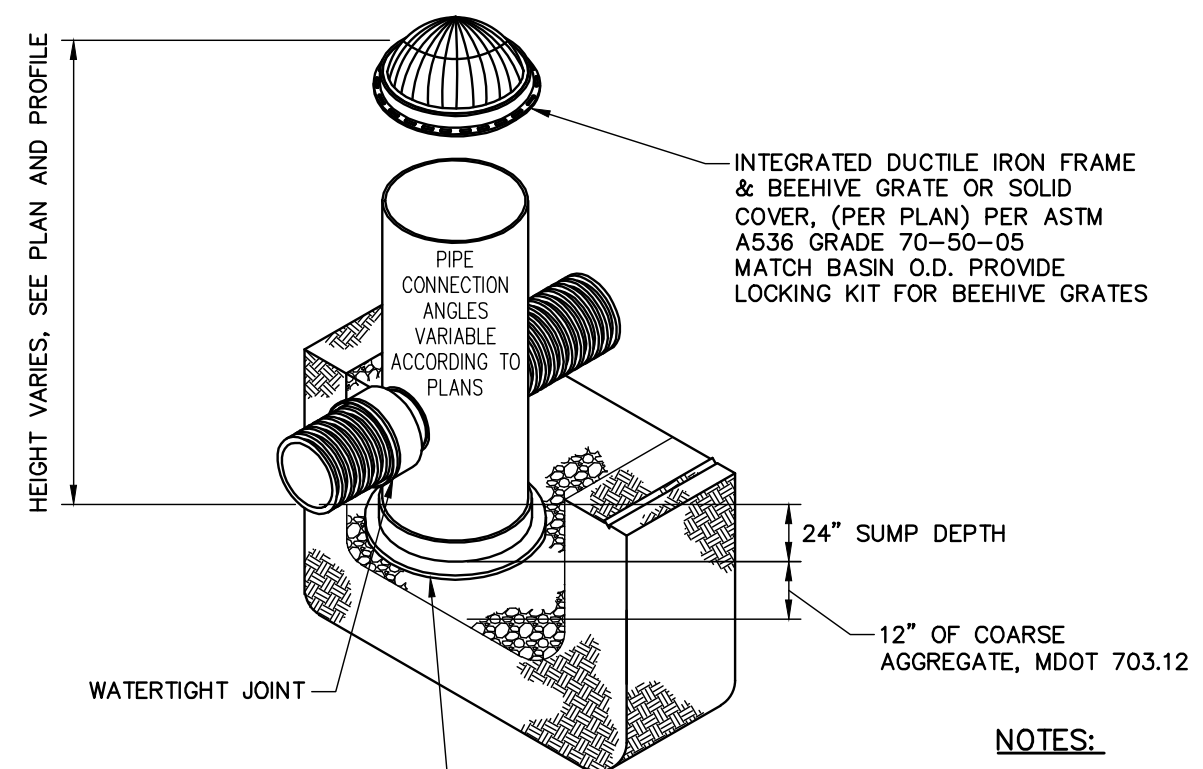
"TRANSITION CURB" SHALL TRANSITION FROM TYPE 3, MOLD 3 TO TYPE 3, MOLD 1 AND BUTT TO CONCRETE SIDEWALK CULVERT.



PIPE INSTALLATION DETAIL

N.T.S.

NOTE: NON SOIL FILTER AREAS ONLY



2' DIA. AREA DRAIN

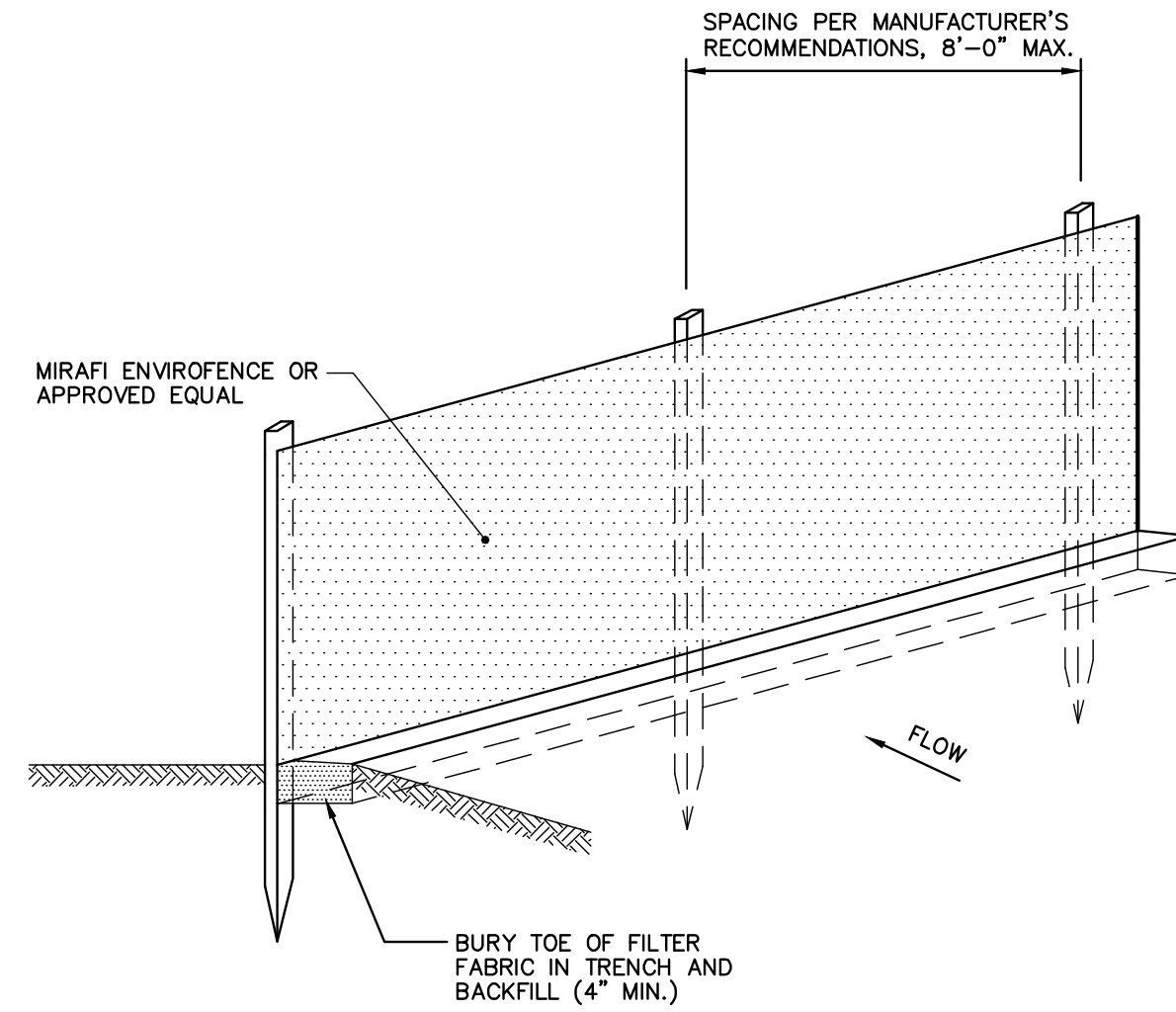
N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

Temporary Erosion Control:

Contractor shall prepare and submit a soil erosion and water pollution control plan to engineer in accordance with section 656.

Measure	Dates For Use	Timing, Activity, and Location
Sedimentation Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and around material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsock, Siltsover Inlet Filter, or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 1	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 95% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events or every 30 days, apply 100-150 lbs (2.5 bales) per 1,000 sq. ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31 Nov. 1 to April 14	On all areas of exposed soil prior to precipitation or every 7 days, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and maintain and repair as necessary.



NOTES:

- INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS
- INSTALL SILT FENCE ACROSS SLOPES
- SILT FENCE SHALL NOT BE USED IN DRAINAGEWAYS

MAINTENANCE: INSPECT FOR TEARS IN THE FABRIC OR DAMAGE TO SUPPORTS. REPAIR AS NECESSARY. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES A DEPTH OF SIX-INCHES OR LESS.

REMOVAL: WHEN UPSLOPE AREAS ARE STABILIZED, THE STRUCTURE AND ANY ACCUMULATED SEDIMENT WILL BE REMOVED.

SILTATION FENCE DETAIL

N.T.S.

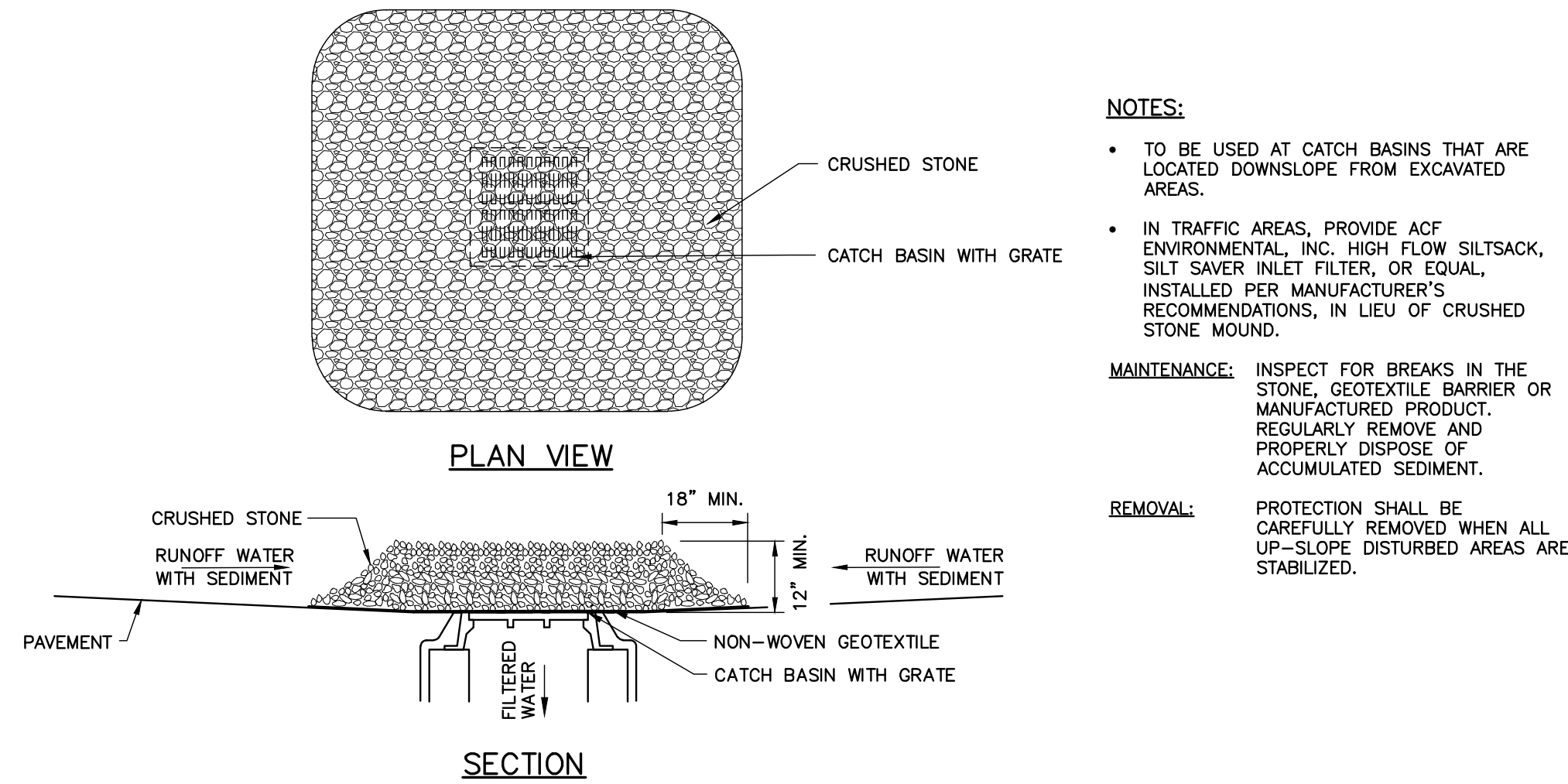
Permanent Erosion Control:

Measure	Dates For Use	Timing, Activity, and Location
Pavement - Base Course - Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build-up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build-up and structure blockages. Slow flow/Ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build-up.
Construction Entrance	Sedimentation of roadways. Off-site dust complaints.



NOTES:

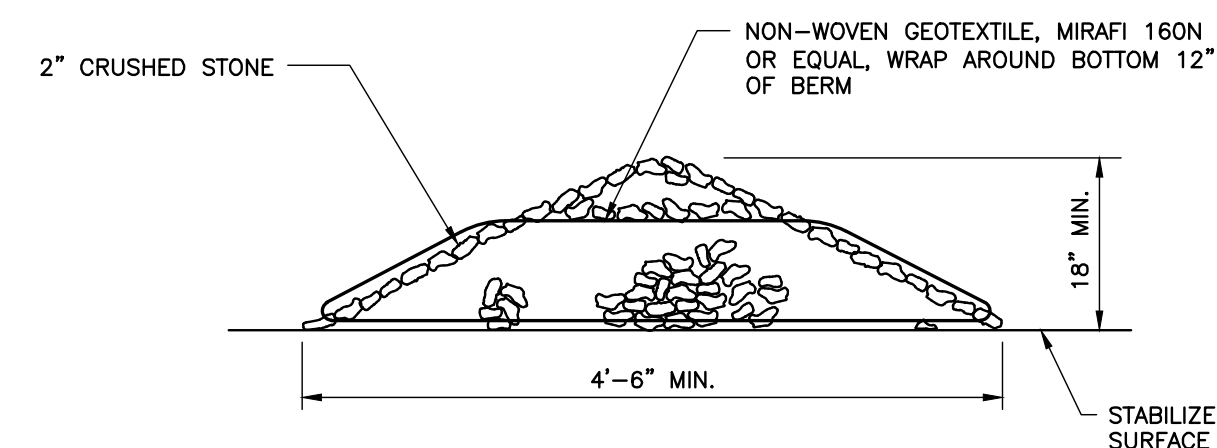
- TO BE USED AT CATCH BASINS THAT ARE LOCATED DOWNSLOPE FROM EXCAVATED AREAS.
- IN TRAFFIC AREAS, PROVIDE ACF ENVIRONMENTAL, INC. HIGH FLOW SILTSAK, SILT SAVER INLET FILTER, OR EQUAL, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, IN LIEU OF CRUSHED STONE MOUND.

MAINTENANCE: INSPECT FOR BREAKS IN THE STONE, GEOTEXTILE BARRIER OR MANUFACTURED PRODUCT. REGULARLY REMOVE AND PROPERLY DISPOSE OF ACCUMULATED SEDIMENT.

REMOVAL: PROTECTION SHALL BE CAREFULLY REMOVED WHEN ALL UP-SLOPE DISTURBED AREAS ARE STABILIZED.

CATCH BASIN PROTECTION DETAIL

N.T.S.



NOTES:

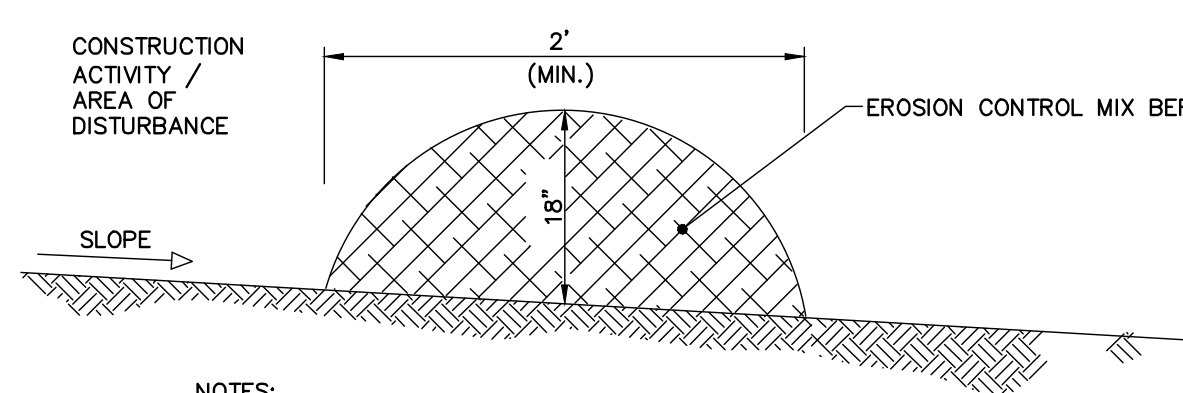
- TO BE USED AS SEDIMENT BARRIERS ON DOWN-SLOPE SIDES OF DISTURBED AREAS
- DIVERSION BERMS SHALL BE INSTALLED ACROSS SLOPES, TO PREVENT EROSION ALONG THEIR LENGTH

MAINTENANCE: INSPECT FOR BREAKS IN STONE OR GEOTEXTILE. REGULARLY REMOVE AND PROPERLY DISPOSE OF ACCUMULATED SEDIMENT.

REMOVAL: AFTER UP-SLOPE AREAS ARE PERMANENTLY STABILIZED, THE BERM SHALL BE REMOVED. ACCUMULATED SEDIMENT SHALL BE REMOVED PRIOR TO REMOVAL OF THE BERM. STONE, IF USED, SHALL BE REMOVED CAREFULLY SO NO LOOSE STONES REMAIN ON THE PAVED SURFACE.

STONE CHECK DAM DETAIL

N.T.S.



NOTES:

Erosion Control Mix Berms

Erosion control mix can be manufactured on or off the project site. It must consist primarily of organic material and may include: shredded bark, stump grindings, composted bark, or acceptable manufactured products. Wood and bark chips, ground construction debris or reprocessed wood products will not be acceptable as the organic component of the mix.

Composition

Erosion control mix shall contain a well-graded mixture of particle sizes and may contain rocks less than 4" in diameter. Erosion control mix must be free of refuse, physical contaminants, and material toxic to plant growth. The mix composition shall meet the following standards:

- The organic matter content shall be between 80 and 100% dry weight basis.
- Particle size by weight shall be 100% passing a 6" screen and a minimum of 70%, maximum of 85%, passing a 0.75" screen.
- The organic portion needs to be fibrous and elongated.
- Large portions of silts, clays or fine sands are not acceptable in the mix.
- Soluble salts content shall be < 4.0 mmhos/cm.
- The pH should fall between 5.0 and 8.0.

EROSION CONTROL MIX BERM (CONTRACTOR OPTION)

N.T.S.

EROSION AND SEDIMENTATION CONTROL NOTES

TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, HYDRAULIC MULCH, HAY AND STRAW MULCH, EROSION CONTROL BLANKET, TURF REINFORCED MATTING, RIPRAP AND TEMPORARY SEEDING. TEMPORARY SEDIMENT CONTROL MEASURES INCLUDE THE USE OF SILT FENCE, EROSION CONTROL MIX BERMS, PLUNGE POOLS, CHECK DAMS, SEDIMENT TRAPS, CATCHBASIN SEDIMENT COLLECTION BAGS AND GEOTEXTILE FILTER BAGS. PERMANENT MEASURES INCLUDE THE USE OF RIPRAP AT EXPOSED STORMDRAIN AND CULVERT INLETS AND OUTLETS, ARMORED SWALES AND SLOPES AND PERMANENT VEGETATION.

GENERAL

- THE PROJECT SHALL CONFORM WITH THE STANDARDS OF THE MAINE CONSTRUCTION GENERAL PERMIT, IF APPLICABLE.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL BMPs HANDBOOK PUBLISHED BY THE MAINE DEP UNLESS OTHERWISE NOTED IN THESE PLANS. [HTTP://MAINE.GOV/DEP/BLWQ/DOCSTAND/ESCBMPs/](http://MAINE.GOV/DEP/BLWQ/DOCSTAND/ESCBMPs/)
- ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.
- THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE SITE WHENEVER POSSIBLE WHILE ALLOWING PROPER SITE DEVELOPMENT.
- CONSTRUCTION STAGING SHALL BE CONDUCTED IN A WAY TO MINIMIZE THE POTENTIAL FOR STORMWATER RUN-ON TO DISTURBED AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. DESCRIPTIONS OF PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:
 - FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS THAT 90% OF THE DISTURBED AREA IS COVERED WITH REASONABLY THICK UNIFORM STAND OF PERMANENT GRASS SPECIES, FREE FROM SIZABLE THIN OR BARE SPOTS.
 - FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THAT COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE OFF.
 - FOR MULCHED AREAS, PERMANENT STABILIZATION MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.
 - FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE. STONE MUST BE SIZED APPROPRIATELY AND IN ACCORDANCE WITH SECTION E-6 OF THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL.
 - FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE ASPHALT BINDER COURSE.
- IF THE AREA WILL REMAIN UNWORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, AND WILL NOT BE BUILT ON, THEN IMMEDIATELY PROVIDE PERMANENT STABILIZATION USING VEGETATION THROUGH PLANTING, SEEDING, SOD OR THROUGH THE USE OF PERMANENT MULCH OR RIPRAP. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR LIGHT, MOISTURE, AND SOIL CONDITIONS. AMEND AREAS OF DISTURBED OVERLY-COMPACTED SUBSOIL WITH TOPSOIL OR COMPOST AND LIGHTLY TILL 2-3" OF SOIL AMENDMENTS INTO THE TOP 8" OF SOIL.

PERMANENT SEEDING SPECIFICATION OUTSIDE OF SOD AREAS AND AS DIRECTED BY ENGINEER: IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND AUGUST 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDING OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDING WITH AROOSTOCK WINTER RYE OR MULCHED AT SPECIFIED RATES. SEE WINTER SEEDING AND MULCHING SPECIFICATIONS FOR STABILIZATION AFTER NOVEMBER 1.

- APPLY TOPSOIL TO A DEPTH OF 4 INCHES, IN COMPACTED AREAS TILL 2-3" OF COMPOST INTO UPPER 8" OF DISTURBED SOIL AND THEN APPLY 4 INCHES OF TOPSOIL
- APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 33 LBS PER 1000 SQUARE FEET AND GRANULAR, COMMERCIAL-GRADE FERTILIZER 10-10-10 AT A RATE OF 18 LBS PER 1000 SQUARE FEET.
- UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2.5 BALES PER 1000 SQUARE FEET AND ANCHOR AS NECESSARY.
- THE SEED MIXTURE FOR THE GRASSSED SOIL FILTERS SHALL CONSIST OF MDOOT METHOD #2 WITH THE ADDITION OF 5% BY WEIGHT, WHITE CLOVER OR APPROVED EQUAL. THE MIX MAY BE APPLIED BY HYDROSEEDING, BY MECHANICAL SPREADER, OR ON SMALL SITES IT CAN BE SPREAD BY HAND. WHEN APPLYING ON BARE SOIL, RAKE THE SOIL TO CREATE GROOVES, APPLY SEED, THEN LIGHTLY RAKE OVER. IN NEW ENGLAND, THE BEST RESULTS ARE OBTAINED WITH A SPRING OR EARLY FALL SEEDING. SUMMER AND LATE FALL SEEDING WILL BENEFIT WITH A LIGHT MULCHING OF WEED-FREE STRAW TO CONSERVE MOISTURE. LATE FALL AND WINTER DORMANT SEEDING REQUIRE A SLIGHT INCREASE IN THE SEEDING RATE. FERTILIZATION IS NOT REQUIRED UNLESS THE SOILS ARE PARTICULARLY INFERTILE.
- THE SEED MIXTURE FOR LAWN AREAS SHALL BE MDOOT METHOD #1, AND PROPORTIONED BY WEIGHT AS FOLLOWS:
 - 45% CREEPING RED FESCUE
 - 25% KENTUCKY BLUEGRASS
 - 15% CHEWINGS FESCUE
 - 10% PERENNIAL RYEGRASS
 - 5% ANNUAL RYEGRASS
- THE SEED MIXTURE FOR NON-LAWN AREAS WITH LOW-MAINTENANCE SHALL BE MDOOT METHOD #2, AND PROPORTIONED BY WEIGHT AS FOLLOWS:
 - 50% CREEPING RED FESCUE
 - 25% SHEEP FESCUE
 - 10% ANNUAL RYEGRASS
 - 10% WHITE CLOVER
 - 5% RED TOP

J. PROTECT ALL SEEDING AREAS WITH MULCH OR EROSION CONTROL BLANKET IN AREAS OF SHEET OR CONCENTRATED FLOWS. MULCH ALL AREAS SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE. SCHEDULE SEEDING OR SODDING TO AVOID FAILURE DUE TO SUMMER DROUGHT AND FALL FROST. NEWLY SEEDING AREAS SHOULD BE PROTECTED FROM VEHICLE TRAFFIC, PEDESTRIAN TRAFFIC AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. AREAS MUST BE REWORKED AND RESTABILIZED IF GERMINATION IS SPARSE OR SURFACE EROSION IS EVIDENT.

K. DITCH LININGS AND RIPRAP INLET AND OUTLET PROTECTION SHALL BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR INSTALLATION OF THE CULVERT.

L. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 3:1, IN THE BASE OF DITCHES AND ANY DISTURBED AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE (WETLANDS AND WATER RESOURCES). EROSION CONTROL BLANKET SHALL BE NORTH AMERICAN GREEN S1508N OR APPROVED EQUAL. EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

M. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURE UPON STABILIZATION OF PROJECT AREA & COST SHALL BE INCIDENTAL TO CONTRACT.

WINTER CONDITIONS

A. WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 1. IF AREAS WITHIN THE CONSTRUCTION AREA ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15 THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS.

GOOD HOUSEKEEPING AND POLLUTION PREVENTION

- SPILL PREVENTION CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER RUNOFF AND APPROPRIATE SPILL PREVENTION, CONTAINMENT AND RESPONSE PLANNING AND IMPLEMENTATION.
- DURING CONSTRUCTION, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUND OR SURFACE WATERS MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO INFILTRATION AREAS. AN "INFILTRATION AREA" IS ANY ARE OF THE SITE THAT BY DESIGN, OR AS A RESULT OF SOIL AND TOPOGRAPHY, ACCUMULATES RUNOFF THAT INFILTRATES IN THE SOIL, DIKES, BERMS, SUMPS AND OTHER FORMS OF TEMPORARY SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
- LOCATE ALL MATERIAL STOCKPILES WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.
- TAKE ALL REASONABLE MEASURES TO MINIMIZE DUST RESULTING FROM THE PROJECT. OIL MAY NOT BE USED FOR DUST CONTROL.
- LOCATE ALL LITTER, CONSTRUCTION DEBRIS AND CONSTRUCTION CHEMICALS WITH CONSIDERATION FOR STORMWATER DRAINAGE PATTERNS AND INFRASTRUCTURE.
- TRENCH OR FOUNDATION DE-WATERING MUST BE SPREAD THROUGH SUFFICIENT NATURAL BUFFERS THAT HAVE CAPACITY TO INFILTRATE THE PUMPED WATER OR SHOULD BE PUMPED TO DESIGNED CONSTRUCTION DEWATERING DEVICES AS DESCRIBED IN THE MAINE EROSION AND SEDIMENT CONTROL BMPs HANDBOOK.
- SEDIMENTS AND SOIL MATERIALS SHOULD BE SWEEP FROM PAVED SURFACES AT THE END OF EACH WORKDAY OR PRIOR TO RAIN EVENTS, WHENEVER POSSIBLE.

INSPECTION AND MAINTENANCE

- A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT, THE MAINE EROSION AND SEDIMENT CONTROL BMPs HANDBOOK OR ANY MUNICIPAL REQUIREMENTS MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF ADDITIONAL BMPs OR MODIFICATIONS TO BMPs ARE NECESSARY, THE MODIFICATIONS MUST BE IMPLEMENTED WITH 7 CALENDAR DAYS OR PRIOR TO ANY PRECIPITATION EVENT. ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
- AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT BY THE CONTRACTOR, SUMMARIZING THE SCOPE OF THE INSPECTION, DATE, MAJOR OBSERVATIONS RELATING TO THE OPERATION OF EROSION AND SEDIMENT CONTROL BMPs, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS TO THE CONSTRUCTION AREA. THE INSPECTION LOG SHOULD BE DELIVERED TO THE PROPERTY OWNER OR RESPONSIBLE CONTRACTING ENTITY UPON COMPLETION OF THE PROJECT.

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LUS JBC

CIVIL DETAILS - 5